



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**PROJECT MANUAL**

INVITATION FOR BIDS IFB 1737 TCP

PROJECT:

EVERETT SMELTER UPLAND CLEANUP-  
2017 PROPERTY GROUP

PROJECT LOCATION:

EVERETT, SNOHOMISH COUNTY, WASHINGTON

BID OPENING DATE AND TIME:

3:00 PM P.D.T., THURSDAY, JUNE 1, 2017

DIRECTOR:	Maia Bellon
PROGRAM MANAGER	James Pendowski
SECTION MANAGER	Robert Warren
PROJECT MANAGER:	Sandra Matthews
SITE MANAGER:	Katie Kulha, P.E.
DATE:	April 2017

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 01 05 – CERTIFICATION OF TECHNICAL SPECIFICATIONS**

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**CERTIFICATION OF TECHNICAL SPECIFICATIONS**

Technical Specifications for Divisions 02, 03, 31, 32, and 36 of this Project Manual were prepared under the supervision and direction of the undersigned, whose seal, as a registered professional engineer, is affixed below. Division 00 and Division 01 are not Technical Specifications, and do not require certification.



4/26/2017

A handwritten signature in black ink, appearing to read "Katherine Kulha".

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Katherine Kulha, P.E.  
Washington State Department of Ecology

Relevant Sections:

- Division 02 – Existing Conditions
- Division 03 – Concrete
- Division 31 – Earthwork
- Division 32 – Exterior Improvements
- Division 36 – Individual Property Cleanup and Restoration

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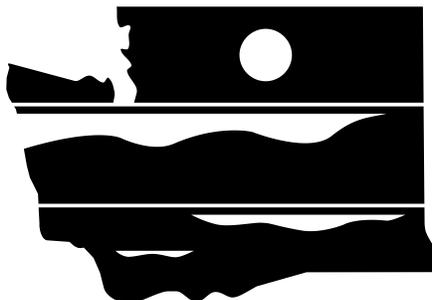
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DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**INVITATION FOR BIDS**

**IFB 1737 TCP**

SEALED BIDS will be accepted for IFB 1737 TCP “EVERETT SMELTER UPLAND CLEANUP – 2017 PROPERTY GROUP” by the State of Washington Department of Ecology (Ecology) until 3:00 p.m. P.D.T. on Thursday, June 1, 2017.

Bid proposals may be submitted by regular mail to:

Attn: Joseph Ward, P.E.  
Department of Ecology  
Toxics Cleanup Program  
PO Box 47600  
Olympia, WA 98504-7600

Bid proposals may be submitted by U.P.S., Express Mail, or hand-delivered to Ecology Headquarters receptionist at:

Attn: Joseph Ward, P.E.  
300 Desmond Drive SE  
Lacey, Washington 98503

PROJECT LOCATION: The 2017 Property Group is located in north Everett, Snohomish County, Washington.

ESTIMATED BID: \$640,000 to \$710,000.

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PRE-BID MEETING AND PROJECT WALKTHROUGH: A pre-bid meeting (including site walk) is scheduled for:

When: 9:00 a.m. (PDT), Monday, May 15, 2017  
Where: Intersection of 9th Street and Pine Street  
Everett, Washington  
Street parking is available.

Note: To keep the group as small as possible, please limit attendance to no more than **two (2)** representatives of each prospective bidding firm attending this meeting.

While the pre-bid meeting is voluntary, it is highly recommended that all prospective Bidders attend this meeting. Bidders who do not attend the voluntary pre-bid meeting must rely solely on the bid documents describing the work to prepare their bid.

Sites may not be fully accessible to people with disabilities. Please contact Katie Kulha at (425) 649-7287 at least five (5) business days prior to the scheduled pre-bid meeting date if special accommodations are required for your attendance.

NOTICES TO BIDDERS:

- A. PREBID SITE ACCESS: The sites are residential properties with occupied single-family homes and Prospective Bidders will only have access to the sites from the rights of way.
- B. GENERAL: Upon Contract award, the construction and successful completion of this Project as defined and required in the Project Manual shall be the responsibility of a Contractor registered in the State of Washington.

This responsibility extends to Work accomplished by subcontractors, vendors, and material and equipment suppliers through agreements with the Contractor. The Contractor shall assure that all personnel performing Work in connection with this Contract are familiar with the Project Manual, including all applicable procedures (including payment procedures), instructions, schedules, and technical requirements of the Contract to ensure construction proceeds to Final Completion and Acceptance in an orderly manner.

All Work shall be done in accordance with the best modern construction practices and under the supervision of capable superintendents, foremen, and workmen fully experienced in their field of work.

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- C. SCHEDULE: The Project shall be Substantially Complete 120 calendar days of the date of the Notice to Proceed, and Final Completion shall be achieved within 60 calendar days of the date of Substantial Completion.
- D. VOLUNTARY MWBE GOALS: Voluntary numerical MWBE participation goals of 10% MBE and 6% WBE have been established for this project. Achievement of these goals is encouraged. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the contract documents, no preferences will be included in the evaluation of bids, no minimum level of MWBE participation shall be required as a condition for receiving an award or completion of the contract work, and bids will not be rejected or considered non-responsive on that basis. Bidders may contact the Office of Minority and Women’s Business Enterprise to obtain information on certified firms.
- D. APPRENTICESHIP UTILIZATION REQUIREMENTS: The apprenticeship utilization requirement for this project is 0% of the total labor hours.
- E. BIDDER RESPONSIBILITY CRITERIA WILL BE EVALUATED FOR THIS PROJECT: See Division 00 Section 00 21 00 - Instructions to Bidders and Section 00 22 13 – Supplemental Bidder Responsibility Criteria, for mandatory and supplemental bidder responsibility criteria for this project.
- F. Ecology reserves the right to accept or reject any or all bid proposals and to waive as informality any minor irregularities of any bid received.

**PROJECT SCOPE/SUMMARY OF WORK:**

This project remediates soils contaminated with arsenic, from operations of the former Asarco Smelter, at eleven (11) single family residential properties in north Everett, Snohomish County, Washington. Work at each property includes, but is not limited to: implementing temporary construction controls for environmental protections; selective demolition of property landscaping and hardscapes; excavating soils contaminated with arsenic; disposing of excavated soils at an approved landfill; importing clean fill material; backfill with imported material, compaction and grading; restoring properties to preconstruction conditions; and landscape and lawn restoration and maintenance, all in accordance with the requirements of the Project Manual.

**PROJECT POINTS OF CONTACT AND INFORMATION:**

Project technical questions or comments may be directed to Katie Kulha, P.E., Site Manager, Northwest Region Toxics Cleanup Program, (425) 649-7287, or email at [Katie.Kulha@ecy.wa.gov](mailto:Katie.Kulha@ecy.wa.gov) .

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To request bid specifications, please contact Joseph Ward, P.E., at (360) 407-7210 or email at [Joe.Ward@ecy.wa.gov](mailto:Joe.Ward@ecy.wa.gov), or access bid documents electronically thru the Department of Ecology's on-line FTP site ([ftp://www.ecy.wa.gov/tcp/Everett Smelter Upland Cleanup 2017 Property Group](ftp://www.ecy.wa.gov/tcp/Everett_Smelter_Upland_Cleanup_2017_Property_Group)).

**Note:**

1. Bid specifications, appendices, plans, addenda are available through the Department of Ecology's on-line FTP site. This on-line FTP site provides bidders with fully usable electronic documents.

END OF INVITATION FOR BIDS

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**1.01 BIDDERS - GENERAL**

- A. *“Bidder”* is an entity or person who submits a bid proposal for the work stipulated in the contract documents.
- B. The Bidder must be registered by the Washington State Department of Labor and Industries in accordance with RCW 18.27.020. Insert the contractor registration number, expiration date, Uniform Business Identifier (UBI) number, and federal tax identification number on the Bid Proposal Form in the applicable spaces.
- C. *“Owner”* is the Washington State Department of Ecology (Ecology).

**1.02 EXPLANATION TO PROSPECTIVE BIDDERS**

- A. In accordance with RCW 39.04.380 the State of Washington is enforcing a **Reciprocal Preference for Resident Contractors**. Any public works bid received from a nonresident contractor from a state that provides an in-state percentage bidding preference, a comparable percentage disadvantage must be applied to the bid of that nonresident contractor.

A nonresident contractor from a state that provides a percentage bid preference means a contractor that:

- 1. is from a state that provides a percentage bid preference to its resident contractors bidding on public works contracts.
- 2. at the time of bidding on a public works project, does not have a physical office located in Washington.

The state of residence for a nonresident contractor is the state in which the contractor was incorporated or, if not a corporation, the state where the contractor's business entity was formed.

All nonresident contractors will be evaluated for out of state bidder preference. If the state of the nonresident contractor provides an in-state contractor preference, a comparable percentage disadvantage will be applied to their bid prior to contract award.

This section does not apply to public works procured pursuant to RCW 39.04.155, 39.04.280, or any other procurement exempt from competitive bidding.

- B. Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must submit a request in writing to the Owner no later than seven (7) calendar days before the bid due date. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders by addendum to the

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solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.

- C. In accordance with the legislative findings and policies set forth in Chapter 39.19 RCW the state of Washington encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women’s Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the contract documents, no preference will be included in the evaluation of bids, no minimum level of MWBE participation shall be required as a condition for receiving an award and bids will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the contract documents will apply.
- D. In accordance with RCW 39.04.320 the state of Washington requires 15% **Apprenticeship Participation** for all projects estimated to cost one million dollars or more. On applicable projects the Invitation for Bid and Bid Proposal form shall establish a minimum required percentage of apprentice labor hours compared to the total labor hours. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530, by phone (360) 902-5320, and e-mail at [Apprentice@lni.wa.gov](mailto:Apprentice@lni.wa.gov), to obtain information on available apprenticeship programs.

**1.03 PREPARATION OF BIDS – CONSTRUCTION**

- A. Bids must be: (1) submitted on the bid proposal forms, or copies of forms, furnished by the Owner or Owner’s agent, and (2) signed in ink. The person signing a bid must initial each change appearing on any bid form. If the bid is made by a corporation, it shall be signed by the corporation’s authorized designee. The address of the bidder shall be typed or printed on the bid form in the space provided.
- B. The bid form may require bidders to submit bid prices for one or more items on various bases, including: (1) lump sum base bid; (2) lump sum bid alternate prices; (3) unit prices; or (4) any combination of items (1) through (3).
- C. Substitute bid proposals will not be considered unless this solicitation authorizes their submission.
- D. Bid proposals which are incomplete, or which are conditioned in any way, or which contain erasures, alterations, or items not called for in the contract documents, or which do not conform to the call for bids, may be rejected as non-responsive at the discretion of the Owner unless the law requires that the omission be deemed non-responsive.

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- E. Only the amounts and information asked for on the Bid Proposal Form and the plans and specifications furnished will be considered as the bid. Bid amounts include all taxes imposed by law, except for Washington State Sales Tax unless noted otherwise.
- F. Each Bidder shall bid upon the work exactly as specified and as provided in the Bid Proposal Form and as clarified above. The Bidder shall bid upon all alternates if alternates are indicated on the Bid Proposal Form. When bidding on alternates for whom there is no charge, the Bidder shall write the words “no charge” in the space provided on the Bid Proposal Form. Failure to bid on alternates may disqualify the bid.

**1.04 BID GUARANTEE**

- A. When the sum of the base bid plus all additive bid alternates is \$35,000.00 or less, bid security is not required.  
  
When the sum of the base bid plus all additive alternates is greater than \$35,000.00, a bid guarantee in the amount of 5% of the base bid amount is required. Failure of the bidder to provide bid guarantee when required shall render the bid non-responsive.
- B. Acceptable forms of bid guarantee are: A bid bond or postal money order, or certified check or cashier’s check made payable to the Washington State Treasurer. Ecology will return bid guarantees (other than bid bond) to unsuccessful bidders as soon as practicable, but not sooner than the execution of a contract with the successful bidder. The successful bidder’s bid guarantee will be returned to the successful bidder with its official notice to proceed with the work of the contract.
- C. The bidder will allow 30 days from bid opening date for acceptance of its bid by the Owner. The bidder will return to the Owner a signed contract, insurance certificate and bond or bond waiver within 15 days after receipt of the contract. If the apparent successful bidder fails to sign all contractual documents or provide the bond and insurance as required or return the documents within 15 days after receipt of the contract, the Owner may terminate the award of the contract.
- D. In the event a bidder discovers an error in its bid following the bid opening, the bidder may request to withdraw its bid under the following conditions:
  - 1. Written notification is received by the Owner within 24 hours following bid opening.
  - 2. The bidder provides written documentation of the claimed error to the satisfaction of the Owner within 72 hours following the bid opening.
  - 3. The Owner will approve or disapprove the request for withdrawal of the bid in writing. If the bidder’s request for withdrawal of its bid is approved, the bidder will be released from further obligation to the Owner

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without penalty. If it is disapproved, the Owner may retain the bidder's bid guarantee.

**1.05 ADDITIVE OR DEDUCTIVE BID ITEMS**

The low bidder, for purposes of award, shall be the responsive bidder offering the low aggregate amount for the base bid item, plus any additive or deductive bid alternates selected by the Owner, and within funds available for the project.

The bidder agrees to hold all bid alternate prices for sixty (60) days from date of bid opening.

**1.06 ACKNOWLEDGEMENT OF ADDENDA**

Bidders shall acknowledge receipt of any addendum to the invitation for bids by including the signed addendum with the Bid Proposal Form. Failure to acknowledge and include addenda with the Bid Proposal Form will result in the bid being declared non-responsive.

**1.07 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK**

The bidder acknowledges that it has taken steps necessary to: (1) ascertain the nature and conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and road; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during the work. The bidder also acknowledges that it has satisfied itself as to character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Owner, as well as from the drawings and specifications made a part of this contract. Any failure of the bidder to take the actions described and acknowledged in this paragraph will not relieve the bidder from responsibility for estimating properly the difficulty and cost of successfully performing the work.

**1.08 BID AMOUNTS**

- A. The bid prices shown for each item on the bid proposal shall include all labor, material, equipment, overhead and compensation to complete all of the work for that item.
- B. The actual cost of a building permit (only) and any public utility hookup fees will be a direct reimbursement to the Contractor or paid directly to the permitting agency by the Owner. Fees for these permits should not be included by the Bidder in the bid amount.
- C. The Bidder agrees to hold the base bid prices for sixty (60) days from date of bid opening.

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**1.09 TAXES**

The bid amounts shall not include Washington State Sales Tax (WSST). All other taxes imposed by law shall be included in the bid amount. The Owner will include WSST in progress payments. The Contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested.

**NOTE: Contractor must bond for contract amount plus the WSST.**

**1.10 SUBMISSION OF BIDS**

- A. Bid Proposals must be submitted on or before the time specified in the Invitation for Bids.
- B. If the base bid and the sum of the additive and/or deductive alternates is one million dollars or more, the Bid Proposal shall comply with the following requirements:
  - 1 Pursuant to RCW 39.30.060, if the base bid and the sum of the additive and/or deductive alternates is one million dollars or more, the Bidder shall provide names of the Subcontractors with whom the Bidder will subcontract for performance of heating, ventilation and air conditioning (HVAC), plumbing, and electrical work.
  - 2 The Bidder can name itself for the performance of this work.
  - 3 The Bidder shall not list more than one Subcontractor for each category of work identified UNLESS Subcontractors vary with bid alternates, in which case the Bidder must indicate which Subcontractor will be used for which alternate.
  - 4 Failure of the Bidder to submit as part of the bid the NAMES of such Subcontractor(s) or to name itself to perform such work shall render the Bidder's bid nonresponsive and, therefore, void.
  - 5 If no heating, ventilation and air conditioning (HVAC), plumbing, and electrical work will be performed as part of the project, and the project value is one million dollars or more, the Bidder shall submit the subcontractor utilization form with the Bid Proposal Form and include the word “none” or “not applicable” on the form.
- C. The Bid Proposal shall be submitted in a sealed envelope addressed to the office specified in the Advertisement for Bids. The envelope shall have printed on the outside:
  - 1. The Invitation for Bid number and project description.
  - 2. The name and address of the bidder.
  - 3. Identification as Bid Proposal.

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- D. Prior to the bid opening, the Owner’s representative will designate the official bid clock. Any part of the bid proposal not received prior to the times specified, per the designated bid clock, will not be considered and the bid will be returned to the bidder unopened.
- E. A bid may be withdrawn in person by a bidder’s authorized representative before the opening of the bids. Bidder(s) representative will be required to show ID and sign on bid summary sheet before it will be released.
- F. People with disabilities who wish to request special accommodation, (e.g., sign language interpreters, Braille, etc.) need to contact the Owner’s project manager ten (10) working days prior to the scheduled bid opening.

**1.11 BID RESULTS**

- A. Within one day after the Bid Opening, Bidders may obtain bid results from Ecology by calling (360) 407-7210 or by accessing the Ecology “ftp” site where results will be posted in the specific Invitation for Bid project folder.

**1.12 LOW RESPONSIBLE BIDDER**

- A. **Mandatory Responsibility Criteria, including Federal requirements:** At the time of bid submittal, a bidder must meet the following mandatory responsibility criteria under RCW 39.04.350 (1) to be considered a responsible bidder and qualified to be awarded a public works project. The bidder must:
  - 1. At the time of bid submittal, have a certificate of registration in compliance with chapter [18.27](#) RCW;
  - 2. Have a current state unified business identifier number;
  - 3. If applicable, have industrial insurance coverage for the bidder’s employees working in Washington as required in Title [51](#) RCW; an employment security department number as required in Title [50](#) RCW; and a state excise tax registration number as required in Title [82](#) RCW;
  - 4. Not be disqualified from bidding on any public works contract under RCW [39.06.010](#) or [39.12.065](#)(3); and
  - 5. If bidding on a public works project subject to the apprenticeship utilization requirements in RCW [39.04.320](#), not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter [49.04](#) RCW for the one-year period immediately preceding the date of the bid solicitation.
- B. **Supplemental Responsibility Criteria:** In addition to the mandatory bidder responsibility, the Owner may adopt relevant supplemental criteria for

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determining bidder responsibility applicable to a particular project which the bidder must meet (RCW 39.04.350 (2)).

1. If applicable, the Owner shall consider an overall accounting of the attached supplemental criteria for determining bidder responsibility found in DIVISION 00, SECTION 00 22 13 - SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA.
2. At least seven (7) days prior to the bid submittal deadline, a potential bidder may request that the Owner modify the supplemental responsibility criteria. The Owner will evaluate the information submitted by the potential bidder and respond before the bid submittal deadline. If the evaluation results in a change of the criteria, the Owner will issue an addendum to the bidding documents identifying the new criteria.
3. Upon Owner's request, the apparent low bidder must supply the requested responsibility information within two (2) business days of request by Owner. Withholding information or failure to submit all the information requested within the time provided may render the bid non-responsive.
4. If the Owner determines that the apparent low bidder is not responsible, the Owner will notify the bidder of its preliminary determination in writing.
5. Within three (3) days after receipt of the preliminary determination, the bidder may withdraw its bid or request a hearing with the Owner where the bidder may appeal the preliminary determination and present additional information to the Owner. The Owner will schedule a hearing within three (3) working days of receipt of the bidder's request.
6. The Owner will issue a Final Determination after reviewing information presented at the hearing.
7. If the Owner determines a bidder to be not responsible, the Owner will provide, in writing, the reasons for the determination. If the final determination affirms that the bidder is not responsible, the Owner will not execute a contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received the final determination.
8. The Owner's Final Determination is specific to this project, and will have no effect on other or future projects.

**1.13 BID EVALUATION AND CONTRACT AWARD**

- A. The Owner will evaluate bids for responsiveness and the bidder for responsibility.
  1. A bid will be considered responsive if it meets the following requirements:
    - a. It is received at the proper time and place.

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- b. It meets the stated requirements of the bid proposal, is complete, and is signed by an authorized representative of the Bidder.
  - c. It is submitted by a licensed/registered Contractor within the state of Washington at the time of bid opening and is not banned from bidding by the Department of Labor and Industries.
  - d. It includes signed acknowledgements of any bid addenda issued during bidding.
  - e. It is accompanied by a bid guarantee, if required.
2. A bidder will be considered responsible if it meets the following requirements:
- a. It meets the mandatory responsibility criteria established in RCW 39.04.350, and an overall accounting of the Supplemental Bidder Responsibility Criteria from **Section 00 22 13 – Supplemental Bidder Responsibility Criteria** established for the project.
- B. The Owner reserves the right to accept or reject any or all bid proposals and to waive as informality any minor irregularities of any bid received.
- C. If inconsistencies or errors are noted in the bid proposal prices, **prices shown in words shall have precedence over prices shown in figures.** The **unit and lump sum prices shall have precedence over their total amounts;** and the **total amounts shall have precedence over the total bid.**
- D. The Owner may negotiate bid price adjustments with the low responsive bidder, including changes in the contract documents, to bring the bid within the available funding per RCW 39.04.015.
- E. The apparent low bidder, for purpose of award, shall be the responsive and responsible bidder offering the low aggregate amount for the base bid plus any selected additive or deductive bid alternates, and meeting all other bid submittal requirements.
- F. **Reciprocal Preference for Resident Contractors.** For a public works bid received from a nonresident Contractor from a state that provides an in-state percentage bidding preference, a Comparable Percentage Disadvantage (CPD) will be applied to the bid of that nonresident contractor. The CPD is the in-state contractor percent advantage provided by the contractor’s home state.
- G. For the purpose of determining the successful bidder, multiply the Nonresident Contractor bid amount by the CPD. The “bid amount” shall be the total of the base bid and all accepted alternate bid items. The CPD shall be added to the Nonresident Contractor bid amount which equates to the Nonresident Disadvantage Total. The Nonresident Disadvantage Total shall be compared to the Washington contractor bid amounts. The bidder with the lowest total shall be the successful bidder. See example below.

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**SECTION 00 21 00 –INSTRUCTIONS TO BIDDERS**

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EXAMPLE:

Nonresident Contractor Bid Amount	\$100,000
<u>Multiplied by the Non-Resident CPD</u>	<u>x 0.05</u>
Non-Resident CPD Total	\$ 5,000

Nonresident Contractor Bid Amount	\$100,000
<u>Non Resident CPD Total</u>	<u>\$ 5,000</u>
Nonresident Disadvantage Total	\$105,000*

\* Note – If the Nonresident Disadvantage Total is lower than all other Washington contractor bid amounts, the Nonresident Contractor is the successful bidder and will be awarded a contract for the bid amount of \$100,000.

If the Nonresident Disadvantage Total is higher than a Washington contractor bid amount, the successful Washington bidder will be awarded a contract for the bid amount.

- H. The Contract will only become effective when signed by the Owner. Prior to the Owner’s signature, any and all costs incurred shall be the sole responsibility of the bidder.

**1.14 DIVISION 00 REFERENCE DOCUMENTS**

- A. Invitation for Bid and/or Advertisement for Bid
- B. Supplemental Responsibility Criteria (if applicable)
- C. Bid Proposal Form
- D. Subcontractor Utilization Form (for projects of \$1 million and over)
- E. Washington State Prevailing Wage Rates

**Note: American Institute of Architects (AIA) Payment Bond and Performance Bond forms (A312) are required. These forms will not be provided by the Owner.**

END OF INSTRUCTIONS TO BIDDERS

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 22 13 – SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA**

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**1.01 DESCRIPTION**

- A. This Section contains supplemental Bidder responsibility criteria specific to this Project as required by Ecology to demonstrate the Bidder can be considered a responsible Bidder and successfully perform the Work.

Documentation required in this section shall be provided by the Apparent Low Bidder within 2 working days of the date of request from Ecology.

- B. Non-compliance with the specified instructions in this Section may result in a Bidder determined to not be responsible by Ecology, in accordance with *RCW 39.04.350(2)*. Ecology may award the Contract to the next lowest responsive Bidder who meets the supplemental responsibility criteria specific to this Project specified in this Section.

**1.02 COMPLETION OF SIMILAR PROJECTS**

- A. Based on the size, complexity, project management requirements and public scrutiny of this Project, Ecology requires a responsible Bidder to provide written information that demonstrates successfully completing previous, relevant projects of a similar size and scope to this Project.

- B. The Bidder shall have been a general contractor for a public agency public works contract in Washington on at least three (3) projects involving the remediation of contaminated soils, including earthwork and landscape restoration within the past five (5) calendar years.

- C. For the purposes of defining whether a previous project meets Ecology's criteria for previous project experience involving relevant projects of similar size and scope, a previous project must meet the following:

1. Bidder must have successfully completed the project, based on assessments that may be obtained from a representative of that project's owner and shall be provided by the Bidder.
2. This project will involve the need to coordinate work safely and successfully around the close proximity of members of the public and/or people who are not construction personnel.
  - a. The Bidder will provide a brief description of how each previous project fit this criterion.
3. Previous projects must have an awarded contract value of at least \$500,000.

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 22 13 – SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA**

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- a. This shall be the amount of the Bidder’s contracted portion of Work Bidder performed or provided by agreement with Subcontractors for the listed project.
  - b. On call contracts do not satisfy this requirement.
- D. The information on previous project provided by Bidder shall include, at a minimum, the following:
  1. Project name
  2. Project location
  3. Project date
  4. Awarded project contract amount
    - a. This shall be the amount of the Bidder’s contracted portion of Work Bidder performed or provided by agreement with Subcontractors for the listed project.
    - b. Awarded project contract amount must be greater than \$500,000.
  5. Final project contract amount
    - a. This shall be the amount of the Bidder’s contracted portion of Work Bidder performed or provided by agreement with Subcontractors for the listed project.
  6. Owner name and name of project owner’s representative.
  7. Owner representative phone Number, address, email address and/or any other contact information Bidder can provide.
  8. A description of the scope of the project and how that project is similar to this Project, including the close interactions with the public involved in the project.
  9. Apprenticeship utilization requirements, as a percent of total labor hours, identified for the project and actual apprenticeship participation percentage of total labor hours used on this project. Bidder shall specifically note those projects where it did not meet the apprenticeship utilization requirements. Bidder who failed to meet the established apprenticeship participation requirements where they were part of the contract will be determined to be a non-responsible bidder and its bid will not be accepted unless there is a documented reason from the contracting agency that this requirement was modified.
  10. Ecology reserves the option of reviewing bidder’s performance on past Everett Smelter projects that fit the criteria, even if the project is not complete at the time of bidding. This option will be additional to the three

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 22 13 – SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA**

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(3) projects submitted by a bidder unless the bidder voluntarily submits the Everett Smelter project.

- E. Ecology may check references for one or more previous projects and/or contact one or more of Ecology representatives indicated in the Bidder's previous project information, who can provide an assessment of the Bidder's performance on that past project.
1. Ecology may evaluate an assessment provided by the previous project's owner based on, but not limited to, the following:
    - a. Quality control.
    - b. Safety record.
    - c. Timeliness of performance.
    - d. Use of skilled personnel.
    - e. Management of subcontractors.
    - f. Availability of and use of appropriate equipment.
    - g. Compliance with contract documents.
    - h. Management of submittals process and change orders.
  2. Ecology may determine a Bidder is not a responsible Bidder if reference checks or assessments identify one or more of the following:
    - a. The Bidder and/or the submitted projects do not meet the supplemental Bidder responsibility criteria to the satisfaction of Ecology.
    - b. Concerns about the Bidder's performance on past projects identified as meeting the supplemental Bidder responsibility criteria, which may include, but not be limited to, any element of the assessment of that Bidder's performance including quality of construction, Bidder's management of subcontractors, timeliness of required submittals, and/or Bidder's safety record on the project.
    - c. Concerns about the Bidder's ability to successfully perform the Work of this Project based upon the information obtained by Ecology.
  3. Ecology may include itself as a reference for one or more past projects the Bidder has performed for Ecology that meet the minimum project criteria specified in this Section, even if the Bidder does not identify Ecology as a past project. Ecology may provide an assessment for review as part of the bid for this Project.
    - a. The Bidder shall assume that Ecology will review Bidder performance on past Everett Smelter projects of similar size and scope to this Project, even if the Bidder does not submit the Everett Smelter project as a past project.





SECTION 00 41 00 – BID PROPOSAL FORM

Invitation for Bid Number: IFB 1737 TCP

Project Name: EVERETT SMELTER UPLAND CLEANUP 2017 PROPERTY GROUP

Bid Opening Date/Time: 3:00 p.m. (P.D.T.), Thursday, June 1, 2017

Name of Contractor: \_\_\_\_\_

State of Washington  
Department of Ecology  
**BID PROPOSAL**

Submit by regular mail to:  
Attn: Joseph Ward, P.E.  
Department of Ecology  
Toxics Cleanup Program  
PO BOX 47600  
Olympia, WA 98504-7600

Submit by Express Mail or hand deliver to Ecology Headquarters receptionist at:  
Attn: Joseph Ward, P.E.  
300 Desmond Drive SE  
Lacey, Washington 98503

*Bids not received by the specified Bid Opening date and time will not be accepted and will be returned unopened to the bidder.*

Having carefully examined the site of the proposed work, and having carefully considered all conditions affecting the work, the undersigned proposes to furnish all labor, materials, equipment, etc., necessary and incidental, and to perform all work as required by and in accordance with the Project Manual, for the amount shown:

<b>TOTAL BASE BID (including Trench Excavation Safety Provisions)</b> <b>(<u>Not</u> including Washington State Sales Tax)</b>	
<b>\$</b> _____ (Total Base Bid Price in numbers only)	<b>U.S. Dollars</b>
_____ (Total Base Bid Price written out in words)	
<b>U.S. Dollars</b>	
<b>TRENCH EXCAVATION SAFETY PROVISIONS</b>	<div style="border: 1px solid black; display: inline-block; padding: 2px 10px;"> <b>\$</b> _____         </div> <small>(Included also in Total Base Bid above)</small>
<small>If the bid amount contains any work which requires trenching exceeding a depth of four feet, all costs for trench safety shall be included in the Total Base Bid Price <b>and indicated above</b> for adequate trench safety systems in compliance with Chapter 39.04 RCW, 49.17 RCW and WAC 296-155-650. <b>Bidder must include a lump sum dollar amount in blank above (even if the value is \$0.00) to be responsive.</b></small>	



SECTION 00 41 00 – BID PROPOSAL FORM

Invitation for Bid Number: IFB 1737 TCP

Project Name: EVERETT SMELTER UPLAND CLEANUP 2017 PROPERTY GROUP

Bid Opening Date/Time: 3:00 p.m. (P.D.T.), Thursday, June 1, 2017

Name of Contractor: \_\_\_\_\_

**Evaluation of Bids:** The evaluation of bids and determination of the lowest responsive bidder will be based on the Total Base Bid price (including Trench Excavation Safety Provisions).

Ecology reserves the right to accept or reject any or all bid prices within sixty (60) days of the bid date.

Ecology reserves the right to accept or reject any or all bid proposals and to waive as informality any minor irregularities of any bid received.

**Unit Prices:** The Unit Prices listed in Table 1 below will be used, as described in the Project Manual, to adjust (increase or decrease) the Contract amount in the event of changes in the contract scope affecting these items of work. Prices provided shall be the complete cost for each unit price bid item, not including overhead and profit and without Washington State Sales Tax. The bidder will propose a price for each item. Failure to propose a price for each item will render the bid non-responsive.

Ecology reserves the right to accept or reject any or all unit prices within sixty (60) days of the bid date.

**TABLE 1: SCHEDULE OF UNIT PRICES  
(Not including Washington State Sales Tax)**

Item No.	Item of Work	Unit	Unit Price (numbers, in U.S. dollars)
UB1	Excavation and Off Site Disposal	Cubic Yards (in place)	\$
UB2	Imported Clean Fill	Cubic Yards (in place)	\$
UB3	Tree Removal	Each	\$

**Contract Time:** The undersigned agrees to achieve Substantial Completion within 120 calendar days after the date of the Notice to Proceed. The Contractor agrees to achieve Final Completion within 60 calendar days after the date of Substantial Completion.



SECTION 00 41 00 – BID PROPOSAL FORM

Invitation for Bid Number: IFB 1737 TCP

Project Name: EVERETT SMELTER UPLAND CLEANUP 2017 PROPERTY GROUP

Bid Opening Date/Time: 3:00 p.m. (P.D.T.), Thursday, June 1, 2017

Name of Contractor: \_\_\_\_\_

**Liquidated Damages:** The undersigned agrees to pay Ecology as liquidated damages \$1,000 per calendar day for each calendar day past substantial completion that it is in default, and agrees that Ecology can deduct this sum from progress payments on this contract, until substantial completion is achieved.

**Apprenticeship Utilization:** The apprentice labor hours required for this project are 0% of the total labor hours. The undersigned agrees to utilize this level of apprenticeship utilization.

**Receipt of Addenda:** Bidder shall acknowledge any addenda issued to this Invitation for Bid by submitting a signed copy of the addenda with the Bid Proposal Form. Failure to do so will render the Bidder's bid non-responsive.



SECTION 00 41 00 – BID PROPOSAL FORM  
Invitation for Bid Number: IFB 1737 TCP  
Project Name: EVERETT SMELTER UPLAND CLEANUP 2017 PROPERTY GROUP  
Bid Opening Date/Time: 3:00 p.m. (P.D.T.), Thursday, June 1, 2017

Name of Contractor: \_\_\_\_\_

### BIDDER INFORMATION

Name of Firm: \_\_\_\_\_

*NOTE: If bidder is a corporation, identify State of Incorporation; if a partnership, give full names and addresses of all parties below, or on an attached page submitted with this bid proposal.*

State of Incorporation: \_\_\_\_\_

Signed by: \_\_\_\_\_, Official Capacity: \_\_\_\_\_

Print Name \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Date: \_\_\_\_\_ Telephone: \_\_\_\_\_ FAX: \_\_\_\_\_

Washington Contractor's Registration No./Expiration Date: \_\_\_\_\_

Federal Tax ID Number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

Washington UBI Number: \_\_\_\_\_

END OF BID PROPOSAL FORM

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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**GENERAL:** The following list of major items of work for this project has been included for Bidder’s convenience in preparing a bid proposal. Exclusion of items from this summary does not indicate exclusion from project. For lump sum items, the Bidder is cautioned that the Project Manual is the only source for measurement of project quantities, and the information and drawings included in the Project Manual have been detailed for this purpose. In preparing a bid proposal, Bidder should note apparent discrepancies between the list below and the Project Manual and consult with Ecology for verification.

**TRENCH EXCAVATION SAFETY PROVISIONS:** If the bid amount contains any work which requires trenching exceeding a depth of four feet, all costs for trench safety shall be included in the Total Base Bid and indicated on the Bid Proposal for adequate trench safety systems in compliance with *Chapter 39.04 RCW, 49.17 RCW, and Chapter 296-155-650 WAC*. **Bidder must include a lump sum dollar amount in the blank on the Bid Proposal Form (even if the value is \$0.00) to be responsive.**

**TOTAL BASE BID**

**The following is a breakdown of items of work included in the Total Base Bid for “Everett Smelter Upland Cleanup – 2017 Property Group”:**

The **Total Base Bid** is a lump sum bid amount that includes all costs, including overhead and profit, for the bidder to provide all labor, materials, and equipment necessary, for the remediation of contaminated soils and site restoration and landscaping of the 11 single family properties in the “2017 Property Group” as specified in the Project Manual, including, but not limited to, the activities described in Items A. through F. below.

Within the breakdown of work for the **Total Base Bid**, ECOLOGY provides basis of bid quantities for specific items of work for bidders to use in the preparation of their bids for this project. The basis of bid quantities are estimated quantities for the work described for all bidders to use. After contract award, as work progress on the project, there may be underruns or overruns in the basis of bid quantities provided by ECOLOGY, which result in an adjustment (either an increase or decrease) to the contract amount. This adjustment to the contract amount due to changes in the basis of bid quantities for excavation and fill will be addressed by **Unit Prices** for changes that are up to 15% of the basis of bid quantity. Adjustments to the contract amount for overruns or underruns in excavation and fill quantities that are above 15% of the basis of bid quantities will be negotiated in accordance with **Section 00 72 00 – General Conditions, Part 7 - Changes**. Unit price bid items listed as “Each” shall be used for all quantity adjustments to the basis of bid quantity provided for those items.

Upon contract award, Items A. through F. will be the basis of developing the project’s Schedule of Values.

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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**A. MOBILIZATION/DEMobilIZATION**

1. MOBILIZATION/DEMobilIZATION shall be a lump sum amount in the project's Schedule of Values and is full compensation including overhead and profit for providing all preparatory work and operations including, but not limited to, those necessary for the movement of equipment, supplies and incidentals to and from the project site; and bonding, insurance, etc.
  - a. Mobilization/demobilization costs in the project's Schedule of Values shall not exceed more than 8% of the cost of the Total Base Bid.
  - b. Mobilization/demobilization will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of actual construction completed at time of payment estimate.
  - c. Mobilization/demobilization payment in first progress payment shall not exceed 50% for this item.

**B. GENERAL REQUIREMENTS**

1. GENERAL REQUIREMENTS shall be a lump sum amount in the project's Schedule of Values, and is full compensation, including overhead and profit, for all costs associated with project administration, supervision, coordination of the contractor's, subcontractors, and suppliers work; coordination and meetings with Ecology; and the development, submittal and implementation of required work plans and other required submittals, all as specified in Division 00 and Division 01 of the Project Manual, that are not identified as a separate pay item in the project's Schedule of Values. Work includes, but is not limited to:
  - a. Prepare and submit project work plans identified in the Project Manual. Implement and maintain plans until final completion.
  - b. Maintain properties and all work areas free of debris and hazards as a result of work activities.
  - c. Complete other miscellaneous items of construction.
  - d. Complete all notices, schedules, and other coordination with Ecology to keep Ecology and property owners fully informed regarding project activities and schedules.
  - e. Obtain Ecology's approval of work stages as specified.
  - f. Complete project and property-specific close-out notifications and procedures as indicated.

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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2. GENERAL REQUIREMENTS will be paid as a percentage of this item's lump sum value provided in the project's Schedule of Values based upon the percentage of work completed under this item at the time of the payment estimate.

**C. HEALTH & SAFETY**

1. HEALTH AND SAFETY shall be a lump sum amount in the project's Schedule of Values and is full compensation, including overhead and profit for the cost of labor, tools, equipment, materials, and incidentals necessary to meet the requirements of the health and safety provisions for all work at the eleven (11) properties in the 2017 Property Group and any other project work sites required by the Health and Safety Plan and as specified in SECTION 01 35 29.13 – HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES. Work under this item includes, but is not limited to, the following:
  - a. Health and Safety (H&S) Plan
    - 1) Prepare appropriate H&S Plan per Project Specifications and Labor and Industries (L&I) requirements and is prepared by an Industrial Hygienist.
    - 2) Provisions necessary per L&I to meet Arsenic Rule.
    - 3) Provisions necessary for Work in close proximity to Property Owners, Tenants, their families, and their residences.
    - 4) Submit H&S plan and personnel certifications to Ecology for Review
  - b. Plan Implementation and Monitoring
    - 1) Implement H&S plan by Industrial Hygienist.
    - 2) Maintenance of safe and reasonable access to property residential buildings for individual Property Owners and their Tenants.
    - 3) Maintain safe and secure working areas to prevent accidental intrusion of children or animals while Work is being performed on each property.
    - 4) Submit H&S reports and monitoring results to Ecology when requested
    - 5) Investigation of H&S incidents by Industrial Hygienist and report to Ecology, when necessary
  - c. H&S Reporting and Closeout
    - 1) Closeout documents as required by L&I

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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- d. Other miscellaneous items of health and safety
- 2. HEALTH AND SAFETY will be paid as a percentage of this item's lump sum value in the project's Schedule of Values based upon the percentage of work completed under this item at the time of the payment estimate.

**D. EXCAVATION/REMEDATION**

- 1. EXCAVATION AND REMEDIATION is full compensation, including overhead and profit, for providing all labor, materials, and equipment necessary for the excavation of contaminated soils at 11 single-family properties to depths of one (1) foot to two (2) feet below ground surface as specified for each property in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**, and offsite disposal at an approved landfill. Major work elements of this item include:
  - a. All preliminary surveying, mapping, photography, and documenting of existing property features and conditions as required by the Project Manual before commencing clearing, grubbing, and earthwork. This includes, but not limited to, topography, existing structures and site features both to be disturbed/restored and to be protected during Work, locations and alignments of landscaping and other features, and private and public utilities
  - b. Identification of shrubs, trees, and other vegetation to be removed from each property for the purpose of replacing these "in kind" during the restoration of each property, except as otherwise specified in the Project Manual.
  - c. Development and implementation of a Project-specific Storm Water Pollution Prevention Plan (SWPPP)
    - 1). Provide materials, construct, install, and maintain all temporary erosion control measures.
    - 2). Provide monthly discharge reports to the Department of Ecology in accordance with the Project National Pollutant Discharge Elimination System (NPDES) Permit.
  - d. Provide, install, and maintain all temporary fencing.
  - e. Selective demolition and removal of specified existing structures, sidewalks, site and landscaping features and structures.
  - f. Proper cleaning and storage of removed materials for re-use and proper disposal of materials to be replaced.
  - g. Removal and disposal of bushes, trees, and stumps/root balls as specified in the Project Manual.

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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- h. Removal and disposal of vegetation, shrubs, and existing lawns.
- i. Excavation and proper disposal of onsite soil with elevated levels of arsenic in the areas and to the depths specified for each property in the Project Manual. Excavation shall be performed in close proximity to buildings, structures, paved areas, trees, and shrubs specified to be retained and protected for each property.
  - 1). *The basis of bid excavation quantity is estimated at **2,415 cubic yards (in place measure)**, based on areas and excavation depths specified for each property in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.*
    - a). Excavation volume represents an in-place volume and excludes known hardscapes, but does not account for material to be retained due to vegetation and other features designated to Remain In Place, 1:1 slopes next to hardscapes, or unknown obstructions. Excavation volume is inclusive of in ground volumes to be removed as part of clearing and grubbing and excavation activities.
    - b). Value has been provided to establish a general order of magnitude for development of the bidder's bid. Actual volume may vary based on the specific requirements in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION** and the Construction Documents.
    - c). Unit Price UB-1 – Excavation and Off Site Disposal described in "Unit Price Bid Items" below will be used to adjust the excavation volume quantity and associated cost for this item of work (either as an added cost to the contract or credit back to the contract) in the event of overrun or underrun of up to 15% in the estimated quantity provided for this work in the Total Base Bid.
- j. All surveying during Work to determine required excavation depths have been achieved.
- k. Maintenance, to the degree possible, of public and essential utility services to each property. Prompt restoration of utility service in the event the Work damages or shuts down utility service.
- l. Replacement of all private utilities damaged or destroyed during the Work. These include, but are not limited to, private irrigation/sprinkler systems and private electrical systems.

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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- m. Importing sufficient clean backfill, crushed aggregate, and topsoil to each property to return the site grades to their pre-construction elevations and conditions, except as otherwise specified in the Project Manual.
    - 1). *The basis of bid quantities for imported clean material volumes are: estimated at **953 cubic yards (in place measure) of common fill, and 1,115 cubic yards (in place measure) of topsoil**, based on six (6) inches of topsoil over the restoration area, with the remaining fill consisting of common fill.*
      - a). Volumes provided are an approximate balance of the excavation volume. Variations in remediation sections and surface materials have not been accounted for in the volumes provided.
      - b). Values have been provided to establish a general order of magnitude for development of the contractor's bid. Actual volumes may vary based on the specific requirements in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION** and the Project Manual.
      - c). Unit Price UB-2 – Imported Clean Fill described in "Unit Price Bid Items" below will be used to adjust the imported fill quantity and the associated cost for this item of work (either as an added cost to the contract or credit back to the contract) in the event of overrun or underrun of up to 15% in the quantities provided for this work in the Total Base Bid.
  - n. Placement and compaction of backfill and topsoil.
  - o. All surveying during Work to determine required backfill has been performed to the tolerances specified in the Project Manual.
2. EXCAVATION AND REMEDIATION will be paid as a percentage of this item's lump sum value in the project's Schedule of Values based upon the percentage of work completed under this item at the time of the payment estimate.

**E. LANDSCAPING AND RESTORATION**

- 1. LANDSCAPE AND RESTORATION is full compensation, including overhead and profit, for providing all labor, materials, and equipment necessary for the restoration of pre-construction conditions as specified in

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

the Project Manual for 11 single-family properties. Major work elements of this item include:

- a. Construction of segmental-block retaining walls in the areas specified in the Project Manual.
- b. Fine grading of restored surfaces to meet required tolerances specified in Project Manual, and repairs of surfaces that settle before Final Completion.
- c. Fertilization of topsoil.
- d. Placement of sod to replace pre-existing grass lawns and where specified in the Project Manual.
- e. Hydroseeding where specified in the Project Manual.
- f. Replacement, reinstallation and/or reconstruction of landscaping features, such as rock-armored slopes, decks, brick patios and walkways, areas of gravel surfacing, private and public utilities, and landscape decorations and other features for each Property.
- g. Planting of “in kind” replacement shrubs, trees, and other vegetation.
- h. Pouring of concrete driveways area and sidewalks selectively demolished and removed during the Work
- i. Landscape maintenance and all finishing work for each Property as specified in the Project Manual for sixty (60) calendar days beginning after acceptance by Ecology of the landscape work for each property.

<b>Estimated Restoration Quantities</b>							
<b>Property Address</b>	<b>Common Fill (CY)</b>	<b>Topsoil (CY)</b>	<b>Landscape Bark (CY)</b>	<b>Crushed Rock (CY)</b>	<b>River Rock (CY)</b>	<b>Sod (SF)</b>	<b>Hydroseed (SF)</b>
901 Pine	110	142	8	16	52	5,922	0
907 Pine	83	92	2	7	0	4,504	0
909 Pine	65	111	11	14	8	3,526	0
929 Pine	71	71	0	17	42	3,846	0
932 Maple	121	121	0	7	0	6,519	0
928 Maple	80	81	0	6	61	4,319	0
926 Maple	76	107	8	7	0	4,119	0
916 Maple	70	90	5	7	0	3,779	0
902 Maple	75	105	8	9	0	4,024	0
2910 9th	39	44	1	8	0	2,086	475
3002 Butler	164	150	12	5	0	2,947	0
<b>Total</b>	<b>953</b>	<b>1,115</b>	<b>56</b>	<b>104</b>	<b>163</b>	<b>45,593</b>	<b>475</b>

2. LANDSCAPE RESTORATION will be paid as a percentage of this item’s lump sum value in the project’s Schedule of Values based upon the

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**

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percentage of work completed under this item at the time of the payment estimate.

**F. PROJECT CLOSEOUT**

1. PROJECT CLOSEOUT shall be a lump sum amount in the project's Schedule of Values, and is full compensation, including overhead and profit, for providing all required closeout records, including surveys, drawings, and documents as necessary to complete the project close out requirements specified in the **SECTION 01 77 00 – CLOSEOUT PROCEDURES**.
2. PROJECT CLOSE OUT will be paid at 100% of this item's lump sum amount provided in the project's Schedule of Values upon completion of all work associated with this item. No partial payments will be made for this item.

**UNIT PRICE BID ITEMS**

**UB-1 EXCAVATION AND OFFSITE DISPOSAL**

Unit price for the Excavation and Offsite Disposal of contaminated soil (designated UB-1 in Project Manual).

- a. If accepted, this unit price will be used to adjust the contract sum if there is an increase or decrease in the quantities of excavation and offsite disposal of contaminated soil up to 15% of the Total Base Bid quantities identified for the work described in the Project Manual.
- b. This unit price includes all costs for excavation, labor, loading, trucking/hauling and legal disposal off-site, but does not include overhead and profit, nor Washington State Sales Tax.
- c. Unit of measurement: In-place Cubic Yard (CY) volume, as calculated by horizontal field measurement of the area of added/deducted excavation multiplied by the field measurement of depth excavated. Truck tickets shall not serve as an alternate basis for measurement.

**UB-2 IMPORTED CLEAN FILL**

Unit price for Imported Clean Fill (designated UB-2 in Project Manual):

- a. If accepted, this unit price will be used to adjust the contract amount if there is an increase or decrease in the quantities of imported clean fill up to 15% of the Total Base Bid basis of bid quantities identified for the work described here and in the Project Manual, which is necessary to restore the site grade to existing pre construction conditions or to grade conditions indicated in the Project Manual.

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- b. This unit price includes all costs for material purchase and transportation to Project Site, as well as on-site handling, placement and compaction as specified in the Project Manual, but does not include overhead and profit nor Washington State Sales Tax.
- c. Unit of measurement: In-place Cubic Yard (CY) volume, as calculated by horizontal field measurement of the area of added/deducted excavation to be backfilled multiplied by the field measurement of depth excavated. Truck tickets shall not serve as an alternate basis for measurement.

**UB-3 TREE REMOVAL**

Unit price for Tree Removal (designated UB-3 in Project Manual).

- a. If accepted, this unit price will be used to adjust the contract sum if there is an increase or decrease in the quantity for the removal of trees or stumps with trunk diameters greater than twelve (12) inches measured 4 vertical feet from existing ground surface where the decision for or against removal is revised during work from the direction provided in the Project Manual.
- b. This unit price includes all costs for removal of the tree, stump and root ball, handling of tree and stump removal waste while on-site, grinding down exposed roots to prevent regrowth, backfill materials and labor for filling holes created by tree removal, trucking of tree and stump removal waste, and legal disposal of waste, but does not include overhead and profit, nor Washington State Sales Tax.
- b. Unit of measurement: per Each tree.

END OF SECTION

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
**SECTION 00 43 43 – PREVAILING WAGES**

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**PREVAILING WAGES**

The State of Washington prevailing wage rates are applicable for this public works project, which is located in Everett, Snohomish County, Washington.

Prevailing wages may be found at the following website address of the Department of Labor and Industries:

<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>.

The prevailing wages for this project are those that are in effect on the date that the bids are due. Residential wage rates shall not be used on this project.

Upon request, Ecology will provide a print version of the applicable prevailing wages for this project. To request a print version, contact the Contracts Officer, Joe Ward, at (360) 407-7210 or at Joe.Ward@ecy.wa.gov.

END OF SECTION

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**SECTION 00 72 00 - GENERAL CONDITIONS**

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**PART 1 –GENERAL CONDITIONS**

**1.01 DEFINITIONS**

- A. “Application for Payment” means a written request submitted by Contractor to A/E for payment of Work completed, in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Ecology or A/E may require.
- B. “Architect”, “Engineer”, or “A/E” means a person or entity lawfully entitled to practice architecture or engineering, representing Ecology within the limits of its delegated authority.
- C. “Change Order” means a written instrument signed by “Ecology” and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any; and (3) the extent of the adjustment in the Contract Time, if any.
- D. “Claim” means Contractor's exclusive remedy for resolving disputes with Ecology regarding the terms of a Change Order or a request for equitable adjustment, as more fully set forth in Part 8 - CLAIMS AND DISPUTE RESOLUTION.
- E. “Contract Award Amount” is the sum of the Base Bid and any accepted Alternates.
- F. “Contract Documents” means the Project Manual, the Invitation for Bid, Advertisement for Bids, Instructions to Bidders, completed Bid Form, General Conditions, Modifications to the General Conditions,, Supplemental Conditions, , Public Works Contract, other Special Forms, Drawings and Specifications, and all addenda and modifications thereof.
- G. “Contract Sum” means the total amount payable by Ecology to Contractor for performance of the Work in accordance with the Contract Documents, including all taxes imposed by law and properly chargeable to the work, except Washington State sales tax.
- H. “Contract Time” means the number of calendar days allotted in the Contract Documents for achieving Substantial Completion of the Work.
- I. “Contractor” means the person or entity who has agreed with Ecology to perform the Work in accordance with the Contract Documents.
- J. “Days” unless otherwise specified day(s) shall mean calendar days.
- K. “Drawings” are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.
- L. “Ecology” means the Washington State Department of Ecology (Ecology) or its authorized representative with the authority to enter into, administer, and/or

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**SECTION 00 72 00 - GENERAL CONDITIONS**

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- terminate the Work in accordance with the Contract Documents and make related determinations and findings.
- M. “Final Acceptance” means the written acceptance issued to Contractor by Ecology after Contractor has completed the requirements of the Contract Documents, as more fully set forth in Section 6.09B.
- N. “Final Completion” means that the Work is fully and finally completed in accordance with the Contract Documents, as more fully set forth in Section 6.09A.
- O. “Force Majeure” means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in paragraph 3.05A.
- P. “Notice” means a written notice that has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice.
- Q. “Notice to Proceed” means a notice from Ecology to Contractor that defines the date on which the Contract Time begins.
- R. “Person” means a corporation, partnership, business association of any kind, trust, company, or individual.
- S. “Prior Occupancy” means Ecology or property owner use of all or parts of the Project before Substantial Completion, as more fully set forth in Section 6.08A.
- T. “Progress Schedule” means a schedule of the Work, in a form satisfactory to Ecology, as further set forth in Section 3.02
- U. “Project” means the total construction of which the Work performed in accordance with the Contract Documents may be the whole or a part and which may include construction by Ecology or by separate contractors.
- V. “Project Record” means the separate set of Drawings and Specifications as further set forth in paragraph 4.02A.
- W. “Property Owner” means the owner of the property, other than Ecology, on which the work under the contract will occur.
- X. “Schedule of Values” means a written breakdown allocating the total Contract Sum to each principle category of Work, in such detail as requested by Ecology.
- Y. “Specifications” are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, and workmanship for the Work, and performance of related services.
- Z. “Subcontract” means a contract entered between the Contractor and a Subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind for, or in connection with, the Work.

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- AA. “Subcontractor”: Any person other than the Contractor who agrees to furnish or furnishes any supplies, materials, equipment, or services of any kind in connection with the Work.
- BB. “Substantial Completion” means that stage in the progress of the Work when the construction is sufficiently complete, as more fully set forth in Section 6.07.
- CC. “Work” means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

**1.02 ORDER OF PRECEDENCE**

Any conflict or inconsistency in the Contract Documents will be resolved by giving the documents precedence in the following order:

- A. Signed Public Works Contract, including any Change Orders
- B. Supplemental Conditions
- C. Modifications to the General Conditions
- D. General Conditions
- E. Specifications: Provisions in Division 01 shall take precedence over provisions of any subsequent divisions.
- F. Drawings: In case of conflict within the Drawings, large-scale drawings shall take precedence over small-scale drawings.
- G. Signed and Completed Bid Form
- H. Instruction to Bidders
- I. Invitation for Bids/Advertisement for Bids

**1.03 EXECUTION AND INTENT**

Contractor Representations: Contractor makes the following representations to Ecology:

- A. Contract Sum reasonable. The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents.
- B. Contractor familiar with project. Contractor has carefully reviewed the Contract Documents, visited and examined the Project site, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality and quantity of the Work, labor, materials, equipment, goods, supplies, services, and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and

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other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof.

- C. Contractor financially capable. Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents.
- D. Contractor can complete work. Contractor is able to furnish the plant, tools, materials, supplies, equipment, and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.

**PART 2 – INSURANCE AND BONDS**

**2.01 CONTRACTOR'S LIABILITY INSURANCE**

General insurance requirements: Prior to commencement of the Work, Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Ecology that such insurance has been procured. Review of the Contractor's insurance by Ecology will not relieve or decrease the liability of Contractor. Companies writing the insurance to be obtained by this section will be licensed to do business under Chapter 48 RCW or comply with the Surplus Lines Law of the State of Washington. Contractor shall include in its bid the cost of all insurance and bonds required to complete the base bid work and accepted alternates. Insurance carriers providing insurance in accordance with the Contract Documents will be rated "A + VII" or better by A.M. Best and ratings will be indicated on the insurance certificates.

- A. Term of insurance coverage. Contractor shall maintain the following insurance coverage during the Work and for one year after Final Acceptance. Contractor shall also maintain the following insurance coverage during the performance of any corrective Work required by Section 5.17.
  - 1. Commercial General Liability (CGL) on an Occurrence Form. Coverage shall include, but not be limited to:
    - a. Completed operations/products liability
    - b. Explosion, collapse, and underground
    - c. Employer's liability coverage
  - 2. Automobile Liability Insurance: Automotive liability
- B. Industrial Insurance compliance. Contractor shall comply with the Washington State Industrial Insurance Act, and, if applicable, the Federal Longshoremen's and Harbor Workers' Act, and the Jones Act.
- C. Insurance to protect for the following: All insurance coverage's will protect against claims for damages for personal and bodily injury or death, as well as claims for property damage, which may arise from operations in connection with the Work whether such operations are by Contractor or any Subcontractor.

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- D. Ecology as Additional insured: All insurance coverage's will be endorsed to include Ecology as an additional named insured for Work performed in accordance with the Contract Documents, and all insurance certificates will evidence Ecology as an additional insured.

**2.02 COVERAGE LIMITS**

Insurance amounts: The coverage limits will be as follows:

- A. Limits of Liability will not be less than \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage (other than Automobile liability) Each Occurrence; Personal Injury and Advertising Liability Each Occurrence.
- B. \$2,000,000 Combined Single Limit Annual General Aggregate.
- C. \$2,000,000 Annual Aggregate for Products and Completed Operations Liability.
- D. \$1,000,000 Combined Single Limit for Automobile Bodily Injury and Property Damage Liability, Each Accident or Loss.

**2.03 INSURANCE COVERAGE CERTIFICATES**

- A. Certificate required: Prior to the commencement of the Work, Contractor shall furnish to Ecology a completed Certificate of Insurance coverage.
- B. List Project info: All insurance certificates will name Ecology's Project number and Project title.
- C. Cancellation provisions: All insurance certificates will specifically require 45 days prior notice to Ecology of cancellation or any material change, except 30 days for surplus line insurance.

**2.04 PAYMENT AND PERFORMANCE BONDS**

Conditions for bonds: Payment and performance bonds for 100% of the Contract Award Amount, plus state sales tax, shall be furnished for the Work, using the Payment Bond and Performance Bond form published by and available from the American Institute of Architects (AIA) – form A312. Prior to execution of a Change Order that, cumulatively with previous Change Orders, increases the Contract Award Amount by 15% or more, the Contractor shall provide either new payment and performance bonds for the revised Contract Sum, or riders to the existing payment and performance bonds increasing the amount of the bonds. The Contractor shall likewise provide additional bonds or riders when subsequent Change Orders increase the Contract Sum by 15% or more. No payment or performance bond is required if the Contract Sum is \$35,000 or less and Contractor agrees that Ecology may, in lieu of the bond, retain 50 percent of the Contract Sum for the period allowed by RCW 39.08.010.

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**2.05 ALTERNATIVE SURETY**

When alternative surety required: Contractor shall promptly furnish payment and performance bonds from an alternative surety as required protecting Ecology and persons supplying labor or materials required by the Contract Documents if:

- A. Ecology has a reasonable objection to the surety; or
- B. Any surety fails to furnish reports on its financial condition if requested by Ecology.

**2.06 BUILDER’S RISK (APPLIES ONLY TO ECOLOGY PROJECTS THAT INCLUDE PERMANENT OR TEMPORARY BUILDINGS)**

- A. Contractor to buy Property Insurance: Contractor shall purchase and maintain property insurance in the amount of the Contract Sum including all Change Orders for the Work on a replacement cost basis until Final Completion. The insurance shall cover the interest of Ecology, Contractor, and any Subcontractors, as their interests may appear.
- B. Losses covered: Contractor property insurance shall be placed on an "all risk" basis and insure against the perils of fire and extended coverage and physical loss or damage including theft, vandalism, malicious mischief, collapse, false work, temporary buildings, debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for A/Es’ services and expenses required as a result of an insured loss.
- C. Waiver of subrogation rights: Ecology and Contractor waive all subrogation rights against each other, any Subcontractors, A/E, A/Es’ sub consultants, separate contractors described in Section 5.20, if any, and any of their subcontractors, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by Ecology as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

**PART 3 – TIME AND SCHEDULE**

**3.01 PROGRESS AND COMPLETION**

Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within a reasonable period thereafter.

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**3.02 CONSTRUCTION SCHEDULE**

- A. Preliminary Progress Schedule: Unless otherwise provided in Division 01, Contractor shall, within 14 days after issuance of the Notice to Proceed, submit a preliminary Progress Schedule. The Progress Schedule shall show the sequence in which Contractor proposes to perform the Work, and the dates on which Contractor plans to start and finish major portions of the Work, including dates for shop drawings and other submittals, and for acquiring materials and equipment.
- B. Form of Progress Schedule: Unless otherwise provided in Division 01, the Progress Schedule will be in the form of a bar chart, or a critical path method analysis, as specified by Ecology. The preliminary Progress Schedule may be general, showing the major portions of the Work, with more specific Progress Schedules in subsequent months as directed by Ecology.
- C. Ecology comments on Progress Schedule: Ecology shall return comments on the preliminary Progress Schedule to Contractor within 14 days of receipt. Review by Ecology of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Ecology may withhold progress payments until a Progress Schedule has been submitted that meets the requirements of this section.
- D. Monthly updates and compliance with Progress Schedule: Contractor shall utilize and comply with the Progress Schedule. On a monthly basis, or as otherwise directed by Ecology, Contractor shall submit an updated Progress Schedule at its own expense to Ecology indicating actual progress. If, in the opinion of Ecology, Contractor is not in conformance with the Progress Schedule for reasons other than acts of Force Majeure as identified in Section 3.05, Contractor shall take such steps as are necessary to bring the actual completion dates of its work activities into conformance with the Progress Schedule, and if directed by Ecology, Contractor shall submit a corrective action plan or revise the Progress Schedule to reconcile with the actual progress of the Work.
- E. Contractor to notify Ecology of delays: Contractor shall promptly notify Ecology in writing of any actual or anticipated event which is delaying or could delay achievement of any milestone or performance of any critical path activity of the Work. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Progress Schedule, and the action being or to be taken to correct the problem. Provision of such notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

**3.03 ECOLOGY'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE**

- A. Ecology may suspend work: Ecology may, at its sole discretion, order Contractor, in writing, to suspend all or any part of the Work for up to 90 days, or for such longer period as mutually agreed.

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- B. Compliance with suspension-Ecology’s options: Upon receipt of a written notice suspending the Work, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of cost of performance directly attributable to such suspension. Within a period up to 90 days after the notice is delivered to Contractor, or within any extension of that period to which the parties shall have agreed, Ecology shall either:
1. Cancel the written notice suspending the Work; or
  2. Terminate the Work covered by the notice as provided in the termination provisions of Part 9 - TERMINATION OF THE WORK.
- C. Resumption of Work: If a written notice suspending the Work is canceled or the period of the notice or any extension thereof expires, Contractor shall resume the Work.
- D. Equitable adjustment for suspensions: Contractor shall be entitled to an equitable adjustment in the Contract Time, or Contract Sum, or both, for increases in the time or cost of performance directly attributable to such suspension, provided Contractor complies with all requirements set forth in Part 7 - CHANGES.

**3.04 ECOLOGY’S RIGHT TO STOP THE WORK FOR CAUSE**

- A. Ecology may stop Work for Contractor’s failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Ecology may order Contractor, in writing, to stop the Work, or any portion thereof, until satisfactory corrective action has been taken.
- B. No Equitable Adjustment for Contractor’s failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Ecology based upon such failure.

**3.05 DELAY**

- A. Force Majeure actions not a default: Force Majeure defined: Any delay in or failure of performance by Ecology or Contractor, other than the payment of money, shall not constitute a default hereunder if and to the extent the cause for such delay or failure of performance was unforeseeable and beyond the control of the party (“Force Majeure”). Acts of Force Majeure include, but are not limited to:
1. Acts of God or the public enemy;
  2. Acts or omissions of any government entity;
  3. Fire or other casualty for which Contractor is not responsible;
  4. Quarantine or epidemic;
  5. Strike or defensive lockout;

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6. Unusually severe weather conditions that could not have been reasonably anticipated; and
  7. Unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Ecology was available.
- B. Contract time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it makes a request for equitable adjustment according to Section 7.03. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.
- C. Contract Time or Contract Sum adjustment if Ecology at fault: Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Ecology, provided the Contractor makes a request according to Section 7.02 and 7.03.
- D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.
- E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by Ecology and Contractor, Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, provided it makes a request for equitable adjustment according to Section 7.03, but shall not be entitled to an adjustment in Contract Sum.
- F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise.

**3.06 NOTICE TO ECOLOGY OF LABOR DISPUTES**

- A. Contractor to notify Ecology of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with the Contract Documents, Contractor shall immediately give notice, including all relevant information, to Ecology.
- B. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tier Subcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

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**3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION**

A. Liquidated Damages:

1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Ecology and time limits stated in the Contract Documents are of the essence. Ecology will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, provisions for liquidated damages are included in the Contract Documents.
2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth in the Contract Documents will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Ecology because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages Ecology would in such event sustain. This amount shall be construed as the actual amount of damages sustained by Ecology, and may be retained by Ecology and deducted from periodic payments to the Contractor.
3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any further obligations or liabilities pursuant to the Contract Documents.

B. Actual Damages:

1. Calculation of Actual Damages: Actual damages will be assessed for failure to achieve Final Completion within the time provided. Actual damages will be calculated on the basis of direct architectural, administrative, and other related costs attributable to the Project from the date when Final Completion should have been achieved, based on the date Substantial Completion is actually achieved, to the date Final Completion is actually achieved. Ecology may offset these costs against any payment due Contractor.

**PART 4 – SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS**

**4.01 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW**

- A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.

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- B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Ecology. If during the performance of the Work Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to A/E in writing.
- D. Contractor knowledge of discrepancy in documents-responsibility: Contractor shall do no Work without applicable Drawings, Specifications, or written modifications, or Shop Drawings where required, unless instructed to do so in writing by Ecology. If Contractor performs any construction activity, and it knows or reasonably should have known that any of the Contract Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for the performance and shall bear the cost for its correction.
- E. Contractor to perform work implied by Contract Documents: Contractor shall provide any work or materials the provision of which is clearly implied and is within the scope of the Contract Documents even if the Contract Documents do not mention them specifically.
- F. Interpretation questions referred to A/E. Questions regarding interpretation of the requirements of the Contract Documents will be referred to the A/E.

**4.02 PROJECT RECORD**

- A. Contractor to maintain Project Record Drawings and Specifications: Contractor shall legibly mark in ink on a separate set of the Drawings and Specifications all actual construction including depths of foundations, horizontal and vertical locations of internal and underground utilities and appurtenances referenced to permanent visible and accessible surface improvements, field changes of dimensions and details, actual suppliers, manufacturers and trade names, models of installed equipment, and Change Order proposals. This separate set of Drawings and Specifications will be the "Project Record."
- B. Update Project Record weekly and keep on site. The Project Record will be maintained on the project site throughout the construction and will be clearly labeled "PROJECT RECORD." The Project Record will be updated at least weekly noting all changes and will be available to Ecology at all times.
- C. Final Project Record to A/E before Final Acceptance. Contractor shall submit the completed and finalized Project Record to A/E prior to Final Acceptance.

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**4.03 SHOP DRAWINGS**

- A. Definition of Shop Drawings. “Shop Drawings” means documents and other information required to be submitted to A/E by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e., form, fit, and attachment details) of materials and equipment. Shop drawings include, but are not limited to, drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Ecology may duplicate, use, and disclose shop drawings provided in accordance with the Contract Documents.
- B. Approval of Shop Drawings by Contractor and A/E. Contractor shall coordinate all shop drawings and review them for accuracy, completeness, and compliance with the Contract Documents and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, shop drawings shall be stamped by an appropriate professional licensed by the State of Washington. Shop drawings submitted to A/E without evidence of Contractor's approval shall be returned for resubmission. Contractor shall review, approve, and submit shop drawings with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Ecology or separate contractors. Contractor's submittal schedule shall allow a reasonable time for A/E review. A/E shall review, approve, or take other appropriate action on the shop drawings. Contractor shall perform no portion of the Work requiring submittal and review of shop drawings until the respective submittal has been reviewed and the A/E has approved or taken other appropriate action. Ecology and A/E shall respond to shop drawing submittals with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed shop drawings. Submittals made by Contractor that are not required by the Contract Documents may be returned without action.
- C. Contractor not relieved of responsibility when Shop Drawings approved. Approval or other appropriate action with regard to shop drawings by Ecology or A/E shall not relieve Contractor of responsibility for any errors or omissions in such shop drawings, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Ecology or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.

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- D. Variations between Shop Drawings and Contract Documents. If shop drawings show variations from the requirements of the Contract Documents, Contractor shall describe such variations in writing, separate from the shop drawings, at the time it submits the shop drawings containing such variations. If A/E approves any such variation, an appropriate Change Order shall be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time, a Change Order need not be issued; however, the modification shall be recorded on the Project Record.
- E. Contractor to submit 5 copies of Shop Drawings. Unless otherwise provided in DIVISION 01, Contractor shall submit to A/E for approval 5 copies of all shop drawings. Unless otherwise indicated, 3 sets of all shop drawings shall be retained by A/E, and 2 sets shall be returned to Contractor.

**4.04 ORGANIZATION OF SPECIFICATIONS**

- A. Specification organization by trade: Specifications are prepared in sections that conform generally with trade practices. These sections are for Ecology and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

**4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS**

- A. A/E, not Contractor, owns Copyright of Drawings and Specifications: Drawings, Specifications, and other documents prepared by A/E are instruments of A/E's service through which the Work to be executed by Contractor is described. Neither Contractor nor any Subcontractor shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by A/E, and A/E shall be deemed the author of them and will, along with any rights of Ecology, retain all common law, statutory, and other reserved rights, in addition to the copyright. All copies of these documents, except Contractor's set, shall be returned or suitably accounted for to A/E, on request, upon completion of the Work.
- B. Drawings and Specifications to be used only for this Project: The Drawings, Specifications, and other documents prepared by the A/E, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Ecology and A/E. Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by A/E appropriate to and for use in the execution of their Work.

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- C. Shop Drawing license granted to Ecology: Contractor and all Subcontractors grant a nonexclusive license to Ecology, without additional cost or royalty, to use for its own purposes (including reproduction) all shop drawings, together with the information and diagrams contained therein, prepared by Contractor or any Subcontractor. In providing shop drawings, Contractor and all Subcontractors warrant that they have authority to grant to Ecology a license to use the shop drawings, and that such license is not in violation of any copyright or other intellectual property right. Contractor agrees to defend and indemnify Ecology and Ecology's Representative pursuant to the indemnity provisions in Section 5.23 from any violations of copyright or other intellectual property rights arising out of Ecology use of the shop drawings hereunder, or to secure for Ecology, at Contractor's own cost, licenses in conformity with this section.
- D. Shop Drawings to be used only for this Project: The shop drawings and other submittals prepared by Contractor, Subcontractors, or its or their equipment or material suppliers, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Ecology. The Contractor, Subcontractors of any tier, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the shop drawings and other submittals appropriate to and for use in the execution of their Work under the Contract Documents.

**PART 5 – PERFORMANCE**

**5.01 CONTRACTOR CONTROL AND SUPERVISION**

- A. Contractor responsible for means and methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, unless the Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Ecology.
- B. Competent Superintendent required: Performance of the Work shall be directly supervised by a competent superintendent who has authority to act for Contractor. The superintendent must be satisfactory to Ecology and shall not be changed without the prior written consent of Ecology. Ecology may require Contractor to remove the superintendent from the Work or Project site, if Ecology reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Ecology has first notified Contractor in writing and allowed a reasonable period for transition.

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- C. Contractor responsible for acts and omissions of self and agents: Contractor shall be responsible to Ecology for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- D. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Contractor's employees will at all time conduct business in a manner that assures fair, equal, and nondiscriminatory treatment of all persons. Ecology may, by written notice, request Contractor to remove from the Work or Project site any employee Ecology reasonably deems incompetent, careless, or otherwise objectionable.
- E. Contractor to keep project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed shop drawings, and permits and permit drawings.
- F. Contractor to comply with ethical standards: Contractor shall ensure that its owner(s) and employees, and those of its Subcontractors, comply with the Executive Conflict of Interest Act, RCW 42.18, which, among other things, prohibits state employees from having an economic interest in any Public Works Contract that was made by, or supervised by, that employee. Contractor shall remove at its sole cost and expense any of its, or its Subcontractors' employees if they are in violation of this Act.

**5.02 PERMITS, FEES, AND NOTICES**

- A. Contractor to obtain and pay for permits: Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and inspections necessary for proper execution and completion of the Work. Prior to Final Acceptance, the approved, signed permits will be delivered to Ecology.
- B. Allowances for permit fees: If allowances for permits or utility fees are called for in the Contract Documents and set forth in Contractor's bid, and the actual costs of those permits or fees differ from the allowances in the Contract Documents, the difference will be adjusted by Change Order.
- C. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work.

**5.03 PATENTS AND ROYALTIES**

- A. Payment, indemnification, and notice: Contractor is responsible for, and shall pay, all royalties and license fees. Contractor shall defend, indemnify, and hold Ecology and Ecology's Representative harmless from any costs, expenses, and liabilities arising out of the infringement by Contractor of any patent, copyright, or other

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intellectual property right used in the Work; however, provided that Contractor gives prompt notice, Contractor shall not be responsible for such defense or indemnity when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents. If Contractor has reason to believe that use of the required design, process, or product constitutes an infringement of a patent or copyright, it will promptly notify Ecology of such potential infringement.

**5.04 PREVAILING WAGES**

- A. Contractor to pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of the Department of Labor and Industries (L&I). The schedule of prevailing wage rates for the locality or localities of the Work, as determined by the Industrial Statistician of L&I, is by reference made a part of the Contract Documents as though fully set forth herein.
- B. Statement of Intent to Pay Prevailing Wages: Before payment is made by Ecology for any work performed by the Contractor and subcontractors whose work is included in the application for payment, the Contractor shall submit, or shall have previously submitted to Ecology for the Project, a Statement of Intent to Pay Prevailing Wages, approved by the Department of Labor and Industries, certifying the rate of hourly wage paid and to be paid each classification of laborers, workers, or mechanics employed upon the Work by Contractor and Subcontractors. Such rates of hourly wage shall not be less than the prevailing wage rate.
- C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to Ecology an Affidavit of Wages Paid, approved by the Department of Labor and Industries, for the Contractor and every subcontractor, of any tier, that performed work on the project.
- D. Disputes: Disputes regarding prevailing wage rates shall be referred for arbitration to the Director of Labor and Industries. The arbitration decision will be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060.
- E. Statement with pay application: Post Statements of Intent at job site: Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the pre-filed statement(s) of intent, as approved. Copies of the approved intent statement(s) will be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.
- F. Contractor to pay for Statements of Intent and Affidavits: In compliance with CHAPTER 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or

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affidavit of wages paid submitted to the Department of Labor and Industries for certification.

- G. Certified Payrolls: Consistent with WAC 296-127-320, the Contractor and any subcontractor shall submit a certified copy of payroll records if requested.

**5.05 HOURS OF LABOR**

- A. Overtime: Contractor shall comply with all applicable provisions of RCW 49.28, and they are incorporated herein by reference. Pursuant to that statute no laborer, worker, or mechanic employed by Contractor, any Subcontractor, or any other person performing or contracting to do the whole or any part of the Work will be permitted or required to work more than eight hours in any one calendar day, provided that in cases of extraordinary emergency, such as danger to life or property, the hours of work may be extended, but in such cases the rate of pay for time employed in excess of eight hours of each calendar day will be not less than one and one-half times the rate allowed for this same amount of time during eight hours of service.
- B. 4-10 Agreements: Notwithstanding the preceding paragraph, RCW 49.28 permits a Contractor or Subcontractor in any public works contract subject to those provisions, to enter into an agreement with its employees in which the employees work up to ten hours in a calendar day. No such agreement may provide that the employees work ten-hour days for more than four calendar days a week. Any such agreement is subject to approval by the employees. The overtime provisions of RCW 49.28 will not apply to the hours, up to forty hours per week, worked pursuant to any such agreement.

**5.06 NONDISCRIMINATION**

- A. Discrimination prohibited by applicable laws: Discrimination in all phases of employment is prohibited by, among other laws and regulations, Title VII of the Civil Rights Act of 1964, the Vietnam Era Veterans Readjustment Act of 1974, Sections 503 and 504 of the Vocational Rehabilitation Act of 1973, the Equal Employment Act of 1972, the Age Discrimination Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, Presidential Executive order 11246, Executive Order 11375, the Washington State Law Against Discrimination, RCW 49.60, and Gubernatorial Executive Order 85-09. These laws and regulations establish minimum requirements for affirmative action and fair employment practices which Contractor must meet.
- B. During Performance of the Work:
1. Protected Classes: Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, age, marital status, or the presence of any physical,

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- sensory, or mental disability, Vietnam era veteran status, or disabled veteran status, nor commit any other unfair practices as defined in RCW 49.60.
2. Advertisements to state nondiscrimination: Contractor shall, in all solicitations or advertisements for employees placed by or for it, state that all qualified applicants will be considered for employment without regard to race, creed, color, national origin, sex, sexual orientation, age, marital status, or the presence of any physical, sensory, or mental disability.
  3. Contractor to notify unions and others of nondiscrimination: Contractor shall send to each labor union, employment agency, or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising the labor union, employment agency, or workers' representative of Contractor's obligations according to the Contract Documents and RCW 49.60.
  4. Ecology and State access to Contractor records: Contractor shall permit access to its books, records, and accounts, and to its premises by Ecology, and by the Washington State Human Rights Commission, for the purpose of investigation to ascertain compliance with this section of the Contract Documents.
  5. Pass through provisions to Subcontractors: Contractor shall include the provisions of this section in every Subcontract.

**5.07 SAFETY PRECAUTIONS**

- A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether onsite or stored offsite; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property, or to protect them from damage, injury, or loss; will erect and maintain all necessary safeguards for such safety and protection; and will notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Ecology. Ecology shall, at all times, have a right of access to all records of exposure.

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- D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
1. Information: At a minimum, Contractor shall inform persons working on the Project site of:
    - a. WAC: The requirements of Chapter 296-62 WAC, General Occupational Health Standards and as may be included in Division 01 – General Requirements.
    - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present
    - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and Material Safety Data Sheets (MSDS) required by Chapter 296-62 WAC.
  2. Training: At a minimum, Contractor shall provide training for persons working on the project site, which includes:
    - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.).
    - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area.
    - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.
    - d. Hazard communications program: The details of the hazard communication program developed by Contractor or its Subcontractors, including an explanation of the labeling system and the MSDS, and how employees can obtain and use the appropriate hazard information.
- E. Hazardous, toxic, or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances will include the following duties:
1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site any substances now or hereafter designated as, or which are subject to regulation as, hazardous,

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toxic, dangerous, or harmful by any federal, state, or local law, regulation, statute or ordinance (hereinafter collectively referred to as “hazardous substances”), in violation of any such law, regulation, statute, or ordinance, but in no case will any such hazardous substance be stored more than 90 days on the Project site.

2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Ecology of all spills or releases of any hazardous substances that are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Ecology of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.
- F. Public safety and traffic: All Work will be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic will be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours will be borne by Contractor.
- G. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- H. No duty of safety by Ecology or A/E: Nothing provided in this section will be construed as imposing any duty upon Ecology or A/E with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

**5.08 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS**

- A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Ecology-approved areas.
- B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Ecology and without expense to Ecology. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.
- C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadways authorized by Ecology. When materials are transported in prosecuting the Work, vehicles will not be loaded beyond the loading capacity

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recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.

- D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Ecology with a copy of all manifests and receipts evidencing proper disposal when required by Ecology or applicable law.
- E. Contractor responsible for care of materials and equipment on site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site. Materials and equipment may be stored on the premises subject to approval of Ecology. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.
- F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Ecology any damage or loss that may occur, except damages or loss caused by the acts or omissions of Ecology. Contractor shall also protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Ecology any such damage or loss that might occur, to the extent such damages or loss are caused by the acts or omissions of Contractor, or any Subcontractor.

**5.09 PRIOR NOTICE OF EXCAVATION**

- A. “Excavation defined: Use of locator services: "Excavation" means an operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than 12 inches in depth for agricultural purposes, or road ditch maintenance that does not change the original road grade or ditch flow line. Before commencing any excavation, Contractor shall provide notice of the scheduled commencement of excavation to all owners of underground facilities and utilities through locator services.

**5.10 UNFORESEEN PHYSICAL CONDITIONS**

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction

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activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Ecology promptly before conditions are disturbed and in no event later than seven (7) days after the first observance of the conditions.

- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum or both, provided it makes a request thereof as provided in Part 7 - CHANGES.

**5.11 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES, AND IMPROVEMENTS**

- A. Contractor to protect and repair property: Contractor shall protect from damage all existing structures, equipment, improvements, utilities, and vegetation at or near the Project site, and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Ecology may have the necessary work performed and charge the cost to Contractor.
- B. Tree and vegetation protection: Contractor shall only remove trees when specifically authorized to do so, and will protect vegetation that will remain in place.

**5.12 LAYOUT OF WORK**

- A. Advanced planning of the Work: Contractor shall plan and lay out the Work in advance of operations so as to coordinate all work without delay or revision.
- B. Layout responsibilities: Contractor shall lay out the Work from Ecology-established baselines and benchmarks indicated on the Drawings, and shall be responsible for all field measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the Work. Contractor shall be responsible for executing the Work to the lines and grades that may be established. Contractor shall be responsible for maintaining or restoring all stakes and other marks established.

**5.13 MATERIAL AND EQUIPMENT**

- A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be

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regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of A/E, is equal to that named in the Specifications, unless otherwise specifically provided in the Contract Documents.

- B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonable implied by, the Contract Documents. Contractor shall not endanger any work by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other Contractor unless approved in advance by Ecology.
- C. Owner may reject defective Work: Should any of the Work be found defective, or in any way not in accordance with the Contract Documents, this work, in whatever stage of completion, may be rejected by Ecology.

**5.14 AVAILABILITY AND USE OF UTILITY SERVICES**

- A. Owner to provide and charge for utilities: Unless otherwise provided in the Contract Documents, the utility service consumed shall be charged to or paid for by Contractor at prevailing rates charged to Owner. Contractor shall carefully conserve any utilities furnished.
- B. Contractor to install temporary connections and meters: Contractor shall, at its expense and in a skillful manner satisfactory to Ecology, install and maintain all necessary temporary connections and distribution lines, together with appropriate protective devices and all meters required to measure the amount of each utility used for the purpose of determining charges. Prior to the date of Final Acceptance, Contractor shall remove all temporary connections, distribution lines, meters, and associated equipment and materials.

**5.15 TESTS AND INSPECTION**

- A. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Ecology, or with the appropriate public authority, and will bear all related costs of tests, inspections, and approvals. Contractor shall give Ecology timely notice of when and where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Ecology.
- B. Ecology may conduct tests and inspections: Ecology may, at any reasonable time, conduct such inspections and tests, as it deems necessary to ensure that the Work

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is in accordance with the Contract Documents. Ecology will promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Ecology, such Ecology inspection and tests are for the sole benefit of Ecology and do not:

1. Constitute or imply acceptance
  2. Relieve Contractor of responsibility for providing adequate quality control measures
  3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment
  4. Relieve Contractor of its responsibility to comply with the requirements of the Contract Documents
  5. Impair Ecology's right to reject defective or nonconforming items or to avail itself of any other remedy to which it may be entitled.
- C. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Ecology, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.
- D. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material, and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Ecology. Ecology may charge Contractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes re-inspection or retest necessary. Ecology shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

**5.16 CORRECTION OF NONCONFORMING WORK**

- A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the requirements of the Contract Documents, it must, if required in writing by Ecology, be uncovered for Ecology observation and be replaced at the Contractor's expense and without change in the Contract Time.
- B. Payment provisions for uncovering covered Work: If any time prior to Final Completion Ecology desires to examine the Work or any portion of it that has been covered, Ecology may request to see such Work, and it will be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes a request therefore as provided

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- in Part 7 - *CHANGES*. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.
- C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Ecology not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. Contractor shall bear all costs of correcting such nonconforming Work, including additional testing and inspections.
- D. Contractor's compliance with warranty provisions: If, within one year after the date of Substantial Completion of the Work, or designated portion thereof, or within one year after the date for commencement of any system warranties established under Section 6.08, or within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written notice from Ecology to do so. Ecology shall give such notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct with respect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this paragraph shall survive Final Acceptance.
- E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Ecology.
- F. Ecology may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Ecology may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.
- G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- H. No Period of limitation on other requirements: Nothing contained in this section will be construed to establish a period of limitation with respect to other obligations that Contractor might have according to the Contract Documents. Establishment of the time period of one year, as described in Section 5.17D, relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced.

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- I. Ecology may accept non-conforming Work and charge Contractor: If Ecology prefers to accept Work that is not in accordance with the requirements of the Contract Documents, Ecology may do so instead of requiring its removal and correction, in which case the Contract sum may be reduced as appropriate and equitable.

**5.17 CLEANUP**

- A. Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Ecology. If Contractor fails to clean up as provided herein, and after reasonable notice from Ecology, Ecology may do so and the cost thereof will be charged to Contractor.

**5.18 ACCESS TO WORK**

- A. Ecology and A/E access to Work site: Contractor shall provide Ecology and A/E access to the Work in progress wherever located.

**5.19 OTHER CONTRACTS**

- A. Ecology may award other contracts: Contractor to cooperate: Ecology may undertake or award other contracts for additional work at or near the Project site. Contractor shall reasonably cooperate with the other contractors and Ecology's employees and will carefully adapt scheduling and perform the Work in accordance with Contract Documents to reasonably accommodate the other work.

**5.20 SUBCONTRACTORS AND SUPPLIERS**

- A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of Ecology, the Contractor shall promptly provide documentation to Ecology demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
1. Have a current certificate of registration as a Contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal.

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2. Have a current Washington Unified Business Identified (UBI) number.
  3. If applicable, have:
    - a. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW.
    - b. A Washington Employment Security Department number, as required in Title 50 RCW.
    - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW.
    - d. An electrical Contractor license, if required by Chapter 19.28 RCW.
    - e. An elevator Contractor license, if required by Chapter 70.87 RCW.
  4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).
  5. On a project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington State Apprenticeship and Training Council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of Ecology's first advertisement of the project.
- B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractors shall furnish in writing to Ecology the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers providing materials in excess of \$2,500. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any Subcontractor or supplier to whom or Ecology's Representative has a reasonable objection, and will obtain Ecology's written consent before making any substitutions or additions.
- C. Subcontracts in writing and pass through provision: All Subcontracts must be in writing. By appropriate written agreement, Contractor shall require each Subcontractor, so far as applicable to the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Ecology in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Ecology and Ecology's Representative in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. However,

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nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.

- D. Coordination of Subcontractors: Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.
- E. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Ecology provided that:
1. Effective only after termination and Ecology approval: The assignment is effective only after termination by Ecology for cause pursuant to Section 9.01 and only for those Subcontracts which Ecology accepts by notifying the Subcontractor in writing; and
  2. Ecology assumes Contractor's responsibilities: After the assignment is effective, Ecology will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract.
  3. Impact of bond: The assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

**5.21 WARRANTY OF CONSTRUCTION**

- A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.
- B. Contractor Responsibilities: With respect to all warranties, express or implied, for Work performed or materials furnished according to the Contract Documents, Contractor shall:
1. Obtain warranties: Obtain all warranties that would be given in normal commercial practice
  2. Warranties for benefit of Ecology: Require all warranties to be executed, in writing, for the benefit of Ecology
  3. Enforcement of warranties: Enforce all warranties for the benefit of Ecology, if directed by Ecology
  4. Contractor responsibility for subcontractor warranties: Be responsible to enforce any subcontractor's, manufacturers, or supplier's warranty should they extend beyond the period specified in the Contract Documents.

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- C. Warranties beyond Final Acceptance: The obligations under this section will survive Final Acceptance.

**5.22 INDEMNIFICATION**

- A. Contractor to Indemnify Ecology and Property Owner: Contractor shall defend, indemnify, and hold Ecology and Ecology's Representative, A/E, and Property Owner harmless from and against all claims, demands, losses, damages, or costs, including but not limited to damages arising out of bodily injury or death to persons and damage to property, caused by or resulting from:
1. Sole negligence of Contractor: The sole negligence of Contractor or any of its Subcontractors
  2. Concurrent negligence: The concurrent negligence of Contractor, or any Subcontractor, but only to the extent of the negligence of Contractor or such Subcontractor, and
  3. Patent Infringement: The use of any design, process, or equipment which constitutes an infringement of any United States patent presently issued, or violates any other proprietary interest, including copyright, trademark, and trade secret.
- B. Employee action and RCW Title 51: In any action against Ecology and any other entity indemnified in accordance with this section by any employee of Contractor, its Subcontractors, Sub-subcontractors, agents, or anyone directly or indirectly employed by any of them, the indemnification obligation of this section shall not be limited by a limit on the amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under RCW Title 51, the Industrial Insurance Act, or any other employee benefit acts. In addition, Contractor waives immunity as to Ecology, A/E, and Property Owner only, in accordance with RCW Title 51.

**PART 6 – PAYMENTS AND COMPLETION**

**6.01 CONTRACT SUM**

- A. Ecology shall pay Contract Sum: Ecology shall pay Contractor the Contract Sum plus state sales tax for performance of the Work in accordance with the Contract Documents.

**6.02 SCHEDULE OF VALUES**

- A. Contractor to submit Schedule of Values: Before submitting its first Application for Payment, Contractor shall submit to Ecology for approval a breakdown allocating the total Contract Sum to each principle category of work, if a lump sum bid, or for each bid item identified in the bid proposal, in such detail as requested

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by Ecology (“Schedule of Values”). The approved Schedule of Values shall identify costs under each bid item in the bid proposal. If the bid proposal is a single lump sum value, then the Schedule of Values shall include appropriate amounts for demobilization, record drawings, operation and maintenance manuals, and any other requirements for Project closeout, and shall be used by Ecology as the basis for progress payments. Payment for Work will be made only for and in accordance with those items included in the Schedule of Values.

**6.03 APPLICATION FOR PAYMENT**

- A. Monthly Application for Payment and substantiation: At monthly intervals, unless determined otherwise by Ecology, Contractor shall submit to Ecology an itemized Application for Payment for Work completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Ecology may require.
- B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.010, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.03 are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment.
- C. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Ecology, the actual progress of the Work with the Progress Schedule.
- D. Payment for material delivered to site or stored off-site: If authorized by Ecology, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:
  - 1. Suitable facility or location: The material will be placed in a warehouse that is structurally sound, dry, lighted, and suitable for the materials to be stored.
  - 2. Facility or location within 10 miles of Project: The facility or location is located within a 10-mile radius of the Project. Other locations may be utilized if approved in writing by Ecology.
  - 3. Facility or location exclusive to Project’s materials: Only materials for the Project are stored within the warehouse (or secure portion of a facility or location set aside for the Project).
  - 4. Insurance provided on materials in facility or location: Contractor furnishes Ecology a Certificate of Insurance extending Contractor's insurance

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coverage for damage, fire, and theft to cover the full value of all materials stored or in transit.

5. Facility or location locked and secure: The warehouse (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access.
6. Ecology right of access to facility or location: Ecology shall at all times have the right of access in company of Contractor.
7. Contractor assumes total responsibility for stored materials: The Contractor and its surety assume total responsibility for the stored materials,
8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Ecology certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Ecology when materials are moved from storage to the Project site.

**6.04 PROGRESS PAYMENTS**

- A. Ecology to pay within 30 Days: Ecology will make progress payments, in such amounts as Ecology determines are properly due, within 30 days after receipt of a properly executed Application for Payment. Ecology will notify Contractor in accordance with RCW 39.76 if the Application for Payment does not comply with the requirements of the Contract Documents.
- B. Withholding retainage: Options for retainage: Ecology will retain 5 percent of the amount of each progress payment until a minimum of 45 days after Final Acceptance and receipt of all documents required by law or the Contract Documents including, at Ecology's request, consent of surety to release of the retainage. In accordance with RCW 60.28, Contractor may request that monies reserved be retained in a fund by Ecology, deposited by Ecology in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Ecology may permit Contractor to provide an appropriate bond in lieu of the retained funds.
- C. Title passes to Ecology upon payment: Title to all Work and materials covered by a progress payment shall pass to Ecology at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Ecology to insist on full compliance by Contractor with the Contract Documents.
- D. Interest on unpaid balances: Payments due and unpaid in accordance with the Contract Documents will bear interest as specified in RCW 39.76.

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**6.05 PAYMENTS WITHHELD**

- A. Ecology’s right to withhold payment: Ecology may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Ecology from loss or damage for reasons including but not limited to:
1. Non-compliant work: Work not in accordance with the Contract Documents;
  2. Remaining Work to cost more than unpaid balance: Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum;
  3. Ecology correction or completion of Work: Work by Ecology to correct defective Work or complete the Work in accordance with Section 5.17;
  4. Contractor’s failure to perform: Failure to perform in accordance with the Contract Documents; or
  5. Contractor’s negligent acts or omissions: Cost or liability that may occur to Ecology as the result of Contractor's fault or negligent acts or omissions.
- B. Ecology to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Ecology shall notify Contractor in accordance with RCW 39.76.

**6.06 RETAINAGE AND BOND CLAIM RIGHTS**

- A. Chapters 39.08 RCW and 60.28 RCW incorporated by reference: Chapters 39.08 RCW and 60.28 RCW, concerning the rights and responsibilities of Contractor and Ecology with regard to performance and payment bonds and retainage, are made a part of the Contract Documents by reference as though fully set forth herein.

**6.07 SUBSTANTIAL COMPLETION**

- A. Substantial Completion defined: Substantial Completion is the stage in the progress of the Work (or portion thereof designated and approved by Ecology) when the construction is sufficiently complete, in accordance with the Contract Documents, so Ecology and Property Owner has full and unrestricted use and benefit of the facilities/improvements (or portions thereof designated and approved by Ecology) can fully occupy the Work (or the designated portion thereof) for the use for which it is intended. All Work other than incidental corrective or punch list work shall be completed. Substantial Completion shall not have been achieved if all systems and parts are not functional, if utilities are not connected and operating normally, if all required occupancy permits have not been issued, or if the Work is not accessible by normal vehicular and pedestrian traffic routes. The date Substantial Completion is achieved will be established in writing by Ecology. Contractor may request an

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early date of Substantial Completion, which must be approved by Change Order. Ecology's or Property Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

**6.08 PRIOR OCCUPANCY**

- A. Prior occupancy defined: Restrictions: Ecology may, upon written notice thereof to Contractor, take possession of or use any completed or partially completed portion of the Work ("prior occupancy") at any time prior to Substantial Completion. Unless otherwise agreed in writing, prior occupancy will not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Ecology provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.
- B. Damage: Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Ecology shall be responsible for loss or damage to the Work resulting from its prior occupancy. Contractor's one-year duty to repair and any system warranties shall begin on building or equipment systems activated and used by Ecology as agreed in writing by Ecology and Contractor.

**6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT**

- A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved will be established by Ecology in writing, but in no case shall constitute Final Acceptance which is a subsequent, separate, and distinct action.
- B. Final Acceptance defined: Final Acceptance shall be achieved when the Contractor has completed the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Ecology in writing. Prior to Final Acceptance, Contractor shall in addition to all other requirements in the Contract Documents, submit to Ecology a written notice of any outstanding disputes or claims between Contractor and any of its subcontractors, including the amounts and other details thereof. Neither Final Acceptance, nor final payment, shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Ecology arising from Contractor's failure to perform the Work in accordance with the Contract Documents
- C. Final payment waives Claim rights: Acceptance of final payment by Contractor or any Subcontractor shall constitute a waiver and release to Ecology of all claims by

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Contractor or any such Subcontractor for an increase in the Contract Sum or the Contract Time, and for every act or omission of Ecology relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Part 8.

**PART 7 – CHANGES**

**7.01 CHANGES IN THE WORK**

- A. Changes in Work, Contract Sum, and Contract Time by Change Order: Ecology may at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes in the Work. These changes in the Work will be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Ecology causes an increase or decrease in the Contract Sum or the Contract Time, an equitable adjustment will be made as provided in Section 7.02 or 7.03, respectively, and such adjustment(s) shall be incorporated into a Change Order.
- B. Ecology may request COP from Contractor: If Ecology desires to order a change in the Work, it may request a written Change Order proposal (COP) from Contractor. Contractor shall submit a Change Order proposal within fourteen (14) days of the request from Ecology, or within such other period as mutually agreed. Contractor's Change Order proposal shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.
- C. COP negotiations: Upon receipt of the Change Order proposal, or a request for equitable adjustment in the Contract Sum or Contract Time, or both, as provided in Sections 7.02 and 7.03, Ecology may accept or reject the proposal, request further documentation, or negotiate acceptable terms with Contractor. Pending agreement on the terms of the Change Order, Ecology may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Ecology approval. All Work done pursuant to any Ecology Representative-directed change in the Work will be executed in accordance with the Contract Documents.
- D. Change Order as full payment and final settlement: If Ecology and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment.

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- E. Failure to agree upon terms of Change Order, Final offer and claims: If Ecology and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time, in writing, request a final offer from Ecology. Ecology shall provide Contractor with its written response within 30 days of Contractor's request. Ecology may also provide Contractor with a final offer at any time. If Contractor rejects Ecology's final offer or the parties are otherwise unable to reach agreement, Contractor's only remedy will be to file a Claim as provided in Part 8.

**7.02 CHANGE IN THE CONTRACT SUM**

**A. General Application:**

1. Contract Sum changes only by Change Order: The Contract Sum shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Sum in its Change Order Proposal.
2. Ecology fault or negligence as basis for change in Contract Sum: If the cost of Contractor's performance is changed due to the fault or negligence of Ecology or anyone for whose acts Ecology is responsible, Contractor shall be entitled to make a request for an equitable adjustment in the Contract Sum in accordance with the following procedure. No change in the Contract Sum will be allowed to the extent that Contractor's changed cost of performance is due to the fault or negligence of Contractor or anyone for whose acts Contractor is responsible; the change is concurrently caused by Contractor and Ecology; or the change is caused by an act of force majeure, as defined in Section 3.05.
  - a. Notice and record keeping for equitable adjustment: A request for an equitable adjustment in the Contract Sum will be based on written notice delivered to Ecology within 7 days of the occurrence of the event-giving rise to the request. For purposes of this part, "occurrence" means when Contractor knew, or in its diligent prosecution of the Work should have known, of the event-giving rise to the request. If Contractor believes it is entitled to an adjustment in the Contract Sum, Contractor shall immediately notify Ecology and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Ecology access to any such records and, if requested, will promptly furnish copies of such records to Ecology.
  - b. Content of notice for equitable adjustment: Failure to comply: Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than 7 days before Contractor's written notice to Ecology. The written notice will set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Sum;

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- the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and, to the extent possible, the amount of the adjustment in Contract Sum requested. Failure to properly give such written notice shall, to the extent Ecology's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
- c. Contractor to provide supplemental information: Within 30 days of the occurrence of the event giving rise to the request, unless Ecology agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement written notice provided in accordance with Subparagraph "a." above with additional supporting data. Such additional data shall include, at a minimum: the amount of compensation requested, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of and that the Contract Documents provide entitlement to an equitable adjustment to Contractor for such act, event, or condition; and documentation sufficiently detailed to permit an informed analysis of the request by Ecology. When the request for compensation relates to a delay or other change in Contract Time, Contractor shall demonstrate the impact on the critical path, in accordance with Section 7.03 C. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Ecology's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
- d. Contractor to proceed with Work as directed: Pending final resolution of any request made in accordance with this paragraph, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.
- e. Contractor to combine requests for same event together: Any requests by Contractor for an equitable adjustment in the Contract Sum and in the Contract Time that arise out of the same event(s) shall be submitted together.
3. Methods for calculating Change Order amount: The value of any work covered by a Change Order or of any request for an equitable adjustment in the Contract Sum, will be determined by one of the following methods:
- a. Fixed price: On the basis of a fixed price as determined in paragraph 7.02B.
- b. Unit Prices: By application of unit prices to the quantities of the items involved as determined in paragraph 7.02 C.

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- c. Time and Materials: On the basis of time and material as determined in paragraph 7.02 D.
4. Fixed price method is default; Ecology may direct otherwise: When Ecology has requested Contractor to submit a Change Order proposal, Ecology may direct Contractor as to which method in Subparagraph 3 above to use when submitting its proposal. Otherwise, Contractor shall determine the value of the Work or of a request for an equitable adjustment, on the basis of the fixed price method.

**B. Change Order Pricing - Fixed Price**

Procedures: When the fixed price method is used to determine the value of any Work covered by a Change Order or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:

1. Breakdown and itemization of details on COP: Contractor's Change Order Proposal or request for adjustment in the Contract Sum shall be accompanied by a complete itemization of the costs including labor, materials, subcontractor costs, and overhead and profit. The costs will be itemized in the manner set forth below and will be submitted on breakdown sheets in a form approved by Ecology.
2. Use of industry standards in calculating costs: All costs will be calculated based on appropriate industry standard methods of calculating labor, material quantities, and equipment costs.
3. Costs contingent on Ecology's actions: If any of Contractor's pricing assumptions are contingent upon anticipated actions of Ecology, Contractor shall clearly state them in the proposal or request for an equitable adjustment.
4. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below, except that overhead and profit shall not be included on deductive changes in the Work. Where a change in the Work involves additive and deductive work by the same Contractor or Subcontractor, small tools, overhead, profit, bond, and insurance markups will apply to the net difference.
5. Breakdown not required if change less than \$1,000: If the total cost of the change in the Work or request for equitable adjustment does not exceed \$1,000, Contractor shall not be required to submit a breakdown if the description of the change in the Work or request for equitable adjustment is sufficiently definitive for Ecology to determine fair value.
6. Breakdown required if change between \$1,000 and \$2,500: If the total cost of the change in the Work or request for equitable adjustment is between \$1,000 and \$2,500, Contractor may submit a breakdown in the following level of detail if the description of the change in the Work or if the request

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for equitable adjustment is sufficiently definitive to permit Ecology to determine fair value:

- a. Lump sum labor
- b. Lump sum material
- c. Lump sum equipment usage
- d. Overhead and profit as set forth below, and
- e. Insurance and bond costs as set forth below

7. Components of increased cost: Any request for adjustment of Contract Sum based upon the fixed price method shall include only the following items:

- a. Craft Labor Costs: These are the labor costs determined by multiplying the estimated or actual additional number of craft hours needed to perform the change in the Work by the hourly labor costs. Craft hours should cover direct labor as well as indirect labor due to trade inefficiencies. The hourly costs will be based on the following:
  - 1) Basic Wages and Benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved “statement of intent to pay prevailing wages” or a higher amount if approved by Ecology. Direct supervision will be a reasonable percentage not to exceed 15 percent of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
  - 2) Worker's Insurance: Direct contributions to the State of Washington for industrial insurance, medical aid, and supplemental pension by the class and rates established by the Department of Labor and Industries.
  - 3) Federal Insurance: Direct contributions required by the Federal Insurance Compensation Act, Federal Unemployment Tax Act, and the State Unemployment Compensation Act.
  - 4) Travel Allowance: Travel allowance and/or subsistence, if applicable, not exceeding those allowances established by regional labor union agreements, which are itemized and identified separately.
  - 5) Safety: Costs incurred due to the Washington Industrial Safety and Health Act, which will be a reasonable percentage not to exceed 2 percent of the sum of the amounts calculated in paragraphs 1), 2), and 3) above.
- b. Material Costs: This is an itemization of the quantity and cost of materials needed to perform the change in the Work. Material costs shall be developed first from actual known costs, second from

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supplier quotations or if these are not available, from standard industry pricing guides. Material costs will consider all available discounts. Freight costs, express charges, or special delivery charges shall be itemized.

- c. Equipment Costs: This is an itemization of the type of equipment and the estimated or actual length of time the construction equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for construction equipment only if used solely for the changed Work or for additional rental costs actually incurred by the Contractor. Equipment charges shall be developed from the current edition of one of the following sources:
- 1) Associated General Contractors - Washington State Department of Transportation Equipment Rental Agreement, current edition, on the Contract execution date.
  - 2) The National Electrical Contractors Association for equipment used on electrical work.
  - 3) The Mechanical Contractors Association of America for equipment used on mechanical work.
  - 4) The Equipment Watch Rental Rate Blue Book shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed that shown in the AGC-WSDOT Equipment Rental Agreement, current edition on the Contract execution date.
- d. Allowance for Small Tools, Expendables, and Consumable Supplies: Small tools consist of tools that cost \$250 or less and are normally furnished by the performing Contractor. The maximum rate for small tools will not exceed the following:
- 1) 3% for Contractor: For Contractor, 3% of direct labor costs.
  - 2) 5% for Subcontractors: For Subcontractors, 5% of direct labor costs.
  - 3) Expendables and consumable supplies directly associated with the change in Work must be itemized.
- e. Subcontractor Costs: This is defined as payments Contractor makes to Subcontractors for changed Work performed by Subcontractors of any tier. The Subcontractors' cost of Work shall be calculated and itemized in the same manner as prescribed herein for Contractor.
- f. Allowance for Overhead: This is defined as costs of any kind attributable to direct and indirect delay, acceleration, or impact,

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added to the total cost to Ecology of any change in the Contract Sum. If the Contractor is compensated under Section 7.03 D, the amount of such compensation shall be reduced by the amount Contractor is otherwise entitled to under this subsection (f). This allowance shall compensate Contractor for all non-craft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B & O taxes, office engineering, estimating costs, additional overhead because of extended time, and any other cost incidental to the change in the Work. It shall be strictly limited in all cases to a reasonable amount, mutually acceptable, or if none can be agreed upon to an amount not to exceed the rates below:

- 1) Projects less than \$3 million: For projects where the Contract Award Amount is under \$3 million, the following shall apply:
  - a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, 16% of the first \$50,000 of cost, and 4% of the remaining cost, if any.
  - b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 16% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
  - c) Contractor markup for Subcontractor Work: For Contractors, for any Work performed by its Subcontractor(s), 6% of the first \$50,000 of the amount due each Subcontractor and 4% of the remaining amount, if any.
  - d) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor and 2% of the remaining amount, if any.
  - e) Basis of cost applicable for markup: The cost to which overhead and profit is to be applied will be determined in accordance with paragraphs 7.02 B 7a.-e.

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- 2) Projects more than \$3 million: For projects where the Contract Award Amount is equal to or exceeds \$3 million, the following shall apply:
- a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, 12% of the first \$50,000 of cost, and 4% of the remaining cost, if any.
  - b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 12% of the first \$50,000 of the cost, and 4% of the remaining cost, if any.
  - c) Contractor markup for Subcontractor Work: For Contractors, for any Work performed by its Subcontractor(s), 4% of the first \$50,000 of the amount due each Subcontractor and 2% of the remaining amount, if any.
  - d) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 4% of the first \$50,000 of the amount due the sub-Subcontractor and 2% of the remaining amount, if any.
  - e) Basis of cost applicable for markup: The cost to which overhead and profit is to be applied will be determined in accordance with paragraph 7.02B 7a.-e.
- g. Allowance for profit: Allowance for profit is an amount to be added to the cost of any change in contract sum, but not to the cost of change in Contract Time for which Contractor has been compensated pursuant to the conditions set forth in Section 7.03. It shall be limited to a reasonable amount, mutually acceptable, or if none can be agreed upon, to an amount not to exceed the rates below:
- 1) Contractor/Subcontractor markup for self-performed Work: For Contractor or Subcontractor of any tier for work performed by their forces, 6% of the cost developed in accordance with Section 7.02B 7a.-e.
  - 2) Contractor/Subcontractor markup for Work performed at lower tier: For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 4% of the

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subcontract cost developed in accordance with Section 7.02B 7a.-e.

- h. Insurance and bond premiums: Cost of change in insurance or bond premium. This is defined as:
  - 1) Contractor's Liability Insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order; and
  - 2) Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work.
  - 3) The costs of any change in insurance or bond premium shall be added after overhead and allowance for profit are calculated in accordance with subparagraph “f” and “g” above.

**C. Change Order Pricing - Unit Prices**

- 1. Content of Ecology authorization: Whenever Ecology authorizes Contractor to perform Work on a unit-price basis, Ecology’s authorization will clearly state:
  - a. Scope: Scope of work to be performed;
  - b. Reimbursement Basis: Type of reimbursement including pre-agreed rates for material quantities, and
  - c. Reimbursement Limit: Cost limit of reimbursement.
- 2. Contractor responsibilities: Contractor shall:
  - a. Cooperate with Ecology and assist in monitoring the Work being performed. As requested by Ecology, Contractor shall identify workers assigned to the Change Order Work and areas in which they are working;
  - b. Leave access as appropriate for quantity measurement; and
  - c. Not exceed any cost limit(s) without Ecology’s prior written approval.
- 3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with paragraph 7.02B and satisfy the following requirements:
  - a. Unit prices must include overhead, profit, bond and insurance premiums: Unit prices shall include reimbursement for all direct and

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indirect costs of the Work, including overhead, profit, bond, and insurance costs; and

- b. Ecology verification of quantities: Quantities must be supported by field measurement statements signed by Ecology.

**D. Change Order Pricing - Time and Material Prices**

1. Content of Ecology authorization: Whenever Ecology authorizes Contractor to perform work on a time-and-material basis, Ecology's authorization will clearly state:
  - a. Scope: Scope of work to be performed;
  - b. Reimbursement basis: Type of reimbursement including pre-agreed rates, if any, for material quantities or labor; and
  - c. Reimbursement limit: Cost limit of reimbursement.
2. Contractor responsibilities: Contractor shall:
  - a. Identify workers assigned: Cooperate with Ecology and assist in monitoring the Work being performed. As requested by Ecology, identify workers assigned to the Change Order Work and areas in which they are working.
  - b. Provide daily timesheets: Identify on daily timesheets all labor performed in accordance with this authorization. Submit copies of daily timesheets within 2 working days for Ecology's review.
  - c. Allow Ecology to measure quantities: Leave access as appropriate for quantity measurement.
  - d. Perform Work efficiently: Perform all Work in accordance with this section as efficiently as possible.
  - e. Not exceed Ecology's cost limit: Not exceed any cost limit(s) without Ecology's prior written approval.
3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with paragraph 7.02B and additional verification supported by:
  - a. Timesheets: Labor detailed on daily timesheets; and
  - b. Invoices: Invoices for material.

**7.03 CHANGE IN THE CONTRACT TIME**

- A. COP requests for Contract Time: The Contract Time shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Time in its Change Order proposal.

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- B. Time extension permitted if not Contractor's fault: If the time of Contractor's performance is changed due to an act of Force Majeure, or due to the fault or negligence of Ecology or anyone for whose acts Ecology is responsible, Contractor will be entitled to make a request for an equitable adjustment in the Contract Time in accordance with the following procedure. No adjustment in the Contract Time will be allowed to the extent Contractor's changed time of performance is due to the fault or negligence of Contractor, or anyone for whose acts Contractor is responsible.
1. Notice and record keeping for Contract Time request: A request for an equitable adjustment in the Contract Time shall be based on written notice delivered within 7 days of the occurrence of the event-giving rise to the request. If Contractor believes it is entitled to adjustment of Contract Time, Contractor will immediately notify Ecology and begin to keep and maintain complete, accurate, and specific daily records. Contractor will give Ecology access to any such record and, if requested, will promptly furnish copies of such record to Ecology.
  2. Timing and Content of Contractor's Notice: Contractor shall not be entitled to an adjustment in the Contract Time for any events that occurred more than 7 days before Contractor's written notice to Ecology. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Time; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and, to the extent possible, the amount of the adjustment in Contract Time requested. Failure to properly give such written notice shall, to the extent Ecology's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.
  3. Contractor to provide supplemental information: Within 30 days of the occurrence of the event-giving rise to the request, unless Ecology agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with Section 7.03B.2 with additional supporting data. Such additional data shall include, at a minimum: the amount of delay claimed, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the delay claimed, but that the delay claimed was actually a result of the act, event, or condition complained of, and that the Contract Documents provide entitlement to an equitable adjustment in Contract Time for such act, event, or condition; and supporting documentation sufficiently detailed to permit an informed analysis of the request by Ecology. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Ecology's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

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4. Contractor to proceed with Work as directed: Pending final resolution of any request in accordance with this paragraph, unless otherwise agreed in writing, Contractor will proceed diligently with performance of the Work.
- C. Contractor to demonstrate impact on critical path of schedule: Any change in the Contract Time covered by a Change Order or based on a request for an equitable adjustment in the Contract Time shall be limited to the change in the critical path of Contractor's schedule attributable to the change of Work or event(s) giving rise to the request for equitable adjustment. Any Change Order proposal or request for an adjustment in the Contract Time shall demonstrate the impact on the critical path of the schedule. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event: had a specific impact on the critical path, and except in case of concurrent delay, was the sole cause of such impact; and could not have been avoided by re-sequencing of the Work or other reasonable alternatives.
- D. Cost of change in Contract Time: Contractor may request compensation for the cost of a change in Contract Time in accordance with this paragraph, 7.03D, subject to the following conditions:
  1. Must be solely fault of Ecology or A/E: The change in Contract Time shall solely be caused by the fault or negligence of Ecology or A/E;
  2. Procedures: Contractor shall follow the procedure set forth in paragraph 7.03B;
  3. Demonstrate impact on critical path: Contractor shall establish the extent of the change in Contract Time in accordance with paragraph 7.03C, and
  4. Limitations on daily costs: The daily cost of any change in Contract Time will be limited to the items below, less the amount of any change in the Contract Sum the Contractor may otherwise be entitled to pursuant to Section 7.02B 7f., for any change in the Work that contributed to this change in Contract Time:
    - a. Non-productive supervision or labor: Cost of nonproductive field supervision or labor extended because of the delay;
    - b. Weekly meetings and indirect activities: Cost of weekly meetings or similar indirect activities extended because of the delay
    - c. Temporary facilities or equipment rental: Cost of temporary facilities or equipment rental extended because of the delay
    - d. Insurance premiums: Cost of insurance extended because of the delay
    - e. Overhead: General and administrative overhead in an amount to be agreed upon, but not to exceed 3% of the Contract Award Amount

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divided by the originally specified Contract Time for each Day of the delay.

**PART 8 – CLAIMS AND DISPUTE RESOLUTION**

**8.01 CLAIMS PROCEDURE**

- A. Claim is Contractor’s remedy: If the parties fail to reach agreement on the terms of any Change Order for Ecology directed Work as provided in Section 7.01, or on the resolution of any request for an equitable adjustment in the Contract Sum as provided in Section 7.02 or the Contract Time as provided in Section 7.03, Contractor's only remedy shall be to file a Claim with Ecology as provided in this section.
- B. Claim filing deadline for Contractor: Contractor shall file its Claim within 120 days from Ecology’s final offer made in accordance with paragraph 7.01E, or by the date of Final Acceptance, whichever occurs first.
- C. Claim must cover all costs and be documented: The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may be entitled. It shall be fully substantiated and documented. At a minimum, the Claim will contain the following information:
1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and time, if any, providing all necessary dates, locations, and items of Work affected by the Claim;
  2. Dates: The date on which facts arose which gave rise to the Claim;
  3. Ecology and A/E employee’s knowledgeable about Claim: The name of each employee of Ecology or A/E knowledgeable about the Claim;
  4. Support from Contract Documents: The specific provisions of the Contract Documents which support the Claim;
  5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;
  6. Copies of supporting information: Copies of any identified documents, other than the Contract Documents, that support the Claim;
  7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought: the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted; and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time;
  8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that

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amount into the categories set forth in, and in the detail as required by Section 7.02; and

9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Ecology is liable.
- D. Ecology's response to Claim filed: After Contractor has submitted a fully documented Claim that complies with all applicable provisions of Parts 7 and 8, Ecology shall respond, in writing, to Contractor as follows:
1. Response time for Claim less than \$50,000: If the Claim amount is less than \$50,000, with a decision within 60 days from the date the Claim is received; or
  2. Response time for Claim of \$50,000 or more: If the Claim amount is \$50,000 or more, with a decision within 60 days from the date the Claim is received or, with notice to Contractor, of the date by which it will render its decision. Ecology will then respond with a written decision in such additional time.
- E. Ecology's review of Claim and finality of decision: To assist in the review of Contractor's Claim, Ecology may visit the Project site or request additional information in order to fully evaluate the issues raised by the Claim. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Ecology's written decision, as set forth above, will be final and conclusive as to all matters set forth in the Claim unless Contractor follows the procedure set forth in Section 8.02.
- F. Waiver of Contractor's rights for failure to comply with this Section: Any Claim of the Contractor against Ecology for damages, additional compensation, or additional time will be conclusively deemed to have been waived by the Contractor unless made in accordance with the requirements of this section.

## **8.02 ARBITRATION**

- A. Timing of Contractor's demand for arbitration: If Contractor disagrees with Ecology's decision rendered in accordance with paragraph 8.01D, Contractor shall will provide Ecology with a written demand for arbitration. No demand for arbitration of any such Claim will be made later than 30 Days after the date of Ecology's decision on such Claim. Failure to demand arbitration within said 30 Day period shall result in Ecology's decision being final and binding upon Contractor and its Subcontractors.

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- B. Filing of Notice for arbitration: Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), with a copy provided to Ecology. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of the AAA or mutually acceptable service before seeking arbitration in accordance with the Construction Industry Arbitration Rules of AAA as follows:
1. Claims less than \$30,000: Disputes involving \$30,000 or less shall be conducted in accordance with the Northwest Region Expedited Commercial Arbitration Rules; or
  2. Claims greater than \$30,000: Disputes over \$30,000 shall be conducted in accordance with the Construction Industry Arbitration Rules of the AAA, unless the parties agree to use the expedited rules.
- C. Arbitration is forum for resolving Claims: All Claims arising out of the Work shall be resolved by arbitration. The judgment upon the arbitration award may be entered, or review of the award may occur, in the superior court having jurisdiction thereof. No independent legal action relating to or arising from the Work will be maintained.
- D. Ecology may combine Claims into same arbitration: Claims between Ecology and Contractor, Contractor and its Subcontractors, Contractor and A/E, and Ecology and A/E shall, upon demand by Ecology, be submitted in the same arbitration or mediation.
- E. Settlement outside of arbitration to be documented in Change Order: If the parties resolve the Claim prior to arbitration judgment, the terms of the resolution shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of the Claim, including all claims for time and for direct, indirect, or consequential costs including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity.

**8.03 CLAIMS AUDITS**

- A. Ecology may audit Claims: All Claims filed against Ecology shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Ecology to verify all or a portion of the Claim or to permit Ecology access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.
- B. Contractor to make documents available: In support of Ecology audit of any Claim, Contractor shall, upon request, promptly make available to Ecology the following documents:
1. Daily time sheets and supervisor's daily reports;
  2. Collective bargaining agreements;

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3. Insurance, welfare, and benefits records;
4. Payroll registers;
5. Earnings records;
6. Payroll tax forms;
7. Material invoices, requisitions, and delivery confirmations;
8. Material cost distribution worksheet;
9. Equipment records (list of company equipment, rates, etc.);
10. Vendors', rental agencies', Subcontractors', and agents' invoices;
11. Contracts between Contractor and each of its Subcontractors, and all lower-tier Subcontractor contracts and supplier contracts;
12. Subcontractors' and agents' payment certificates;
13. Canceled checks (payroll and vendors);
14. Job cost report, including monthly totals;
15. Job payroll ledger;
16. Planned resource loading schedules and summaries;
17. General ledger;
18. Cash disbursements journal;
19. Financial statements for all years reflecting the operations on the Work. In addition, Ecology may require, if it deems it appropriate, additional financial statements for 3 years preceding execution of the Work;
20. Depreciation records on all company equipment, whether these records are maintained by the company involved, its accountant, or others;
21. If a source other than depreciation records is used to develop costs for Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents;
22. All non-privileged documents which relate to each and every Claim together with all documents which support the amount of any adjustment in Contract Sum or Contract Time sought by each Claim;
23. Worksheets or software used to prepare the Claim establishing the cost components for items of the Claim including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents which establish the time periods, individuals involved, the hours for the individuals, and the rates for individuals; and
24. Worksheets, software, and all other documents used by Contractor to prepare its bid.

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- C. Contractor shall provide facilities for audit and shall cooperate: The audit may be performed by employees of Ecology or a representative of Ecology. Contractor and its Subcontractors will provide adequate facilities acceptable to Ecology for the audit during normal business hours. Contractor and all Subcontractors will make a good-faith effort to cooperate with Ecology’s auditors.

**PART 9 – TERMINATION OF THE WORK**

**9.01 TERMINATION BY ECOLOGY FOR CAUSE**

- A. 7 Day Notice to Terminate for Cause: Ecology may, upon 7 Days written notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Ecology) the Work or any part of it for cause upon the occurrence of any one or more of the following events:
1. Contractor fails to prosecute the Work: Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;
  2. Contractor bankrupt: Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
  3. Contractor fails to correct Work: Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
  4. Contractor fails to supply workers or materials: Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
  5. Contractor failure to pay Subcontractors or labor: Contractor repeatedly fails to make prompt payment due to Subcontractors or for labor;
  6. Contractor violates laws: Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
  7. Contractor in material breach of Contract: Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Ecology’s actions upon termination: Upon termination, Ecology may at its option:
1. Take possession of Project site: Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
  2. Accept assignment of Subcontracts: Accept assignment of subcontracts pursuant to Section 5.21;
  3. Finish the Work: Finish the Work by whatever other reasonable method it deems expedient.

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- C. Surety's role: Ecology's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. Contractor's required actions: When Ecology terminates the Work in accordance with this section, Contractor shall take the actions set forth in paragraph 9.02B, and shall not be entitled to receive further payment until the Work is accepted.
- E. Contracts to pay for unfinished Work: If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E's services and expenses made necessary thereby and any other extra costs or damages incurred by Ecology in completing the Work, or as a result of Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor will pay the difference to Ecology. These obligations for payment will survive termination.
- F. Contractor and surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. Conversion of "Termination for Cause" to "Termination for Convenience": If Ecology terminates Contractor for cause, and it is later determined that none of the circumstances set forth in paragraph 9.01A exist, then such termination will be deemed a termination for convenience pursuant to Section 9.02.

**9.02 TERMINATION BY ECOLOGY FOR CONVENIENCE**

- A. Ecology Notice of Termination for Convenience: Ecology may, upon written notice, terminate (without prejudice to any right or remedy of Ecology) the Work or any part of it for the convenience of Ecology.
- B. Contractor response to termination Notice: Unless Ecology directs otherwise, after receipt of a written notice of termination for either cause or convenience, Contractor shall promptly:
  - 1. Cease Work: Stop performing Work on the date and as specified in the notice of termination;
  - 2. No further orders or Subcontracts: Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
  - 3. Cancel orders and Subcontracts: Cancel all orders and subcontracts, upon terms acceptable to Ecology, to the extent that they relate to the performance of Work terminated;
  - 4. Assign orders and Subcontracts to Ecology: Assign to Ecology all of the right, title, and interest of Contractor in all orders and subcontracts;

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5. Take action to protect the Work: Take such action as may be necessary or as directed by Ecology to preserve and protect the work, Project site, and any other property related to this Project in the possession of Contractor in which Ecology has an interest; and
  6. Continue performance not terminated: Continue performance only to the extent not terminated.
- C. Terms of adjustment in Contract Sum if Contract terminated: If Ecology terminates the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred prior to the effective date of the termination plus a reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7.
- D. Ecology to determine whether to adjust Contract Time: If Ecology terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Ecology.

**PART 10 – MISCELLANEOUS PROVISIONS**

**10.01 GOVERNING LAW**

- A. Applicable law and venue: The Contract Documents and the rights of the parties herein will be governed by the laws of the State of Washington. Venue will be in Thurston County, Ecology's principal place of business, unless otherwise specified by Ecology.

**10.02 SUCCESSORS AND ASSIGNS**

- A. Bounds to successors; Assignment of Contract: Ecology and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Work without written consent of the other, except that Contractor may assign the Work for security purposes, to a bank or lending institution authorized to do business in the State of Washington. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents.

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**10.03 MEANING OF WORDS**

- A. Meaning of words used in Specifications: Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or the code of any governmental authority, whether such reference be specific or by implication, will be to the latest standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in these Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference will apply to as many such articles as are shown on the Drawings or are required to complete the installation.

**10.04 RIGHTS AND REMEDIES**

- A. No waiver of rights: No action or failure to act by Ecology or A/E shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of an acquiescence in a breach therein, except as may be specifically agreed in writing.

**10.05 CONTRACTOR REGISTRATION**

- A. Contractor to be registered or licensed: Pursuant to RCW 39.06, Contractor shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.

**10.06 TIME COMPUTATIONS**

- A. Computing time: When computing any period of time, the day of the event from which the period of time begins will not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation unless stated otherwise.

**10.07 RECORDS RETENTION**

- A. Six year records retention period: The wage, payroll, and cost records of Contractor, and its Subcontractors, and all records subject to audit in accordance with Section 8.03, shall be retained for a period of not less than 6 years after the date of Final Acceptance.

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**10.08 THIRD-PARTY AGREEMENTS**

- A. No third party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between: A/E and Contractor; Ecology and any Subcontractor; or any persons other than Ecology and Contractor.

**10.09 ANTITRUST ASSIGNMENT**

- A. Contractor assigns overcharge accounts to Ecology: Ecology and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Ecology any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance with the Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and that are not passed on to Ecology under a Change Order. Contractor shall put a similar clause in its Subcontracts and require a similar clause in its sub-Subcontracts, such that all claims for such overcharges on the Work are passed to Ecology by Contractor.

**10.10 HEADING AND CAPTIONS**

- A. Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

END OF GENERAL CONDITIONS

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
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**1.01 GENERAL:**

Paragraphs shown are keyed to the Washington Department of Ecology General Conditions paragraphs that they supplement.

In accordance with the *GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS* take precedence over *GENERAL CONDITIONS*.

**2.02 Replaces Section 2.02 – COVERAGE LIMITS INSURANCE COVERAGE CERTIFICATES**

A. Insurance Coverage Certificates

The Contractor shall furnish acceptable proof of insurance coverage on the state of Washington Certificate of Insurance form SF500A, dated 07/02/92 or ACORD form.

B. Required Coverages

1. For a contract less than \$100,000.00, the coverage required is:

- a. Comprehensive General Liability Insurance – The Contractor shall at all times during the term of this contract, at its cost and expense, carry and maintain general public liability insurance, including contractual liability, against claims for bodily injury, personal injury, death or property damage occurring or arising out of services provided under this contract. This insurance shall cover claims caused by any act, omission, or negligence of the Contractor or its officers, agents, representatives, assigns or servants. The limits of liability insurance, which may be increased as deemed necessary by the contracting parties, shall be:

Each Occurrence	\$1,000,000.00
General Aggregate Limits (other than products – commercial operations)	\$1,000,000.00
Products – Commercial Operations Limit	\$1,000,000.00
Personal and Advertising Injury Limit	\$1,000,000.00
Fire Damage Limit (any one fire)	\$50,000.00
Medical Expense Limit (any one person)	\$5,000.00

- b. If the contract is for underground utility work, then the Contractor shall provide proof of insurance for that above in the form of Explosion, Collapse and Underground (XCU) coverage.
- c. Employers Liability on an occurrence basis in an amount not less than \$1,000,000.00 per occurrence.

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2. For contracts over \$100,000.00 but less than \$5,000,000.00 the Contractor shall obtain coverage limits as listed for contracts below \$100,000.00 and General Aggregate and Products – Commercial Operations Limit of not less than \$2,000,000.00.
  
3. Coverage for Comprehensive General Bodily Injury Liability Insurance for a contract over \$5,000,000.00 is:
 

Each Occurrence	\$2,000,000.00
General Aggregate Limits (other than products – commercial operations)	\$4,000,000.00
Products – Commercial Operations limit	\$4,000,000.00
Personal and Advertising Injury Limit	\$2,000,000.00
Fire Damage Limit (any one fire)	\$50,000.00
Medical Expense Limit (any one Person)	\$5,000.00
  
4. For all Contracts – Automobile Liability: in the event that services delivered pursuant to this contract involve the use of vehicles or the transportation of clients, automobile liability insurance shall be required. If Contractor-owned personal vehicles are used, a Business Automobile Policy covering at a minimum Code 2 “owned autos only” must be secured. If Contractor employee’s vehicles are used, the Contractor must also include under the Business Automobile Policy Code 9, coverage for non-owned autos. The minimum limits for automobile liability is: \$1,000,000.00 per occurrence, using a combined single limit for bodily injury and property damage.
  
5. For Contracts for Hazardous Substance Removal (Asbestos Abatement, PCB Abatement, UST abandonment; soils/sediments/groundwater contamination that includes: PCB contamination remediation, petroleum contamination remediation, heavy metals contamination remediation; etc.)

- a. In addition to providing insurance coverage for the project as outlined above, the Contractor shall provide Pollution Liability insurance for the hazardous substance removal as follows:

<u>EACH OCCURRENCE</u>	<u>AGGREGATE</u>
\$1,000,000.00	\$5,000,000.00

or \$2,000,000.00 each occurrence/aggregate bodily injury and property damage combined single limit.

- 1) Insurance certificate must state that the insurer is covering hazardous substance removal.
- 2) Should this insurance be secured on a “claims made” basis, the coverage must be continuously maintained for one year following

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the project’s “final completion” through official completion of the project, plus one year following.

For Contracts where hazardous substance removal is a subcomponent of contracted work, the general Contractor shall provide to Ecology a certificate of insurance for coverage as defined in 5a. above. The State of Washington, Department of Ecology must be listed as an additional insured. This certificate of insurance must be provided to Ecology prior to commencing work.

**3.02 Replaces Section 3.02 B – CONSTRUCTION SCHEDULE**

B. The Progress Schedule shall be in the form of a Critical Path Method (CPM) logic network or, with the approval of Ecology, a bar chart schedule may be submitted. The scheduling of construction is the responsibility of the Contractor and is included in the contract to assure adequate planning and execution of the work. The schedule will be used to evaluate progress of the work for payment based on the Schedule of Values. The schedule shall show the Contractor’s planned order and interdependence of activities, and sequence of work. As a minimum the schedule shall include:

- Date of Notice to Proceed;
- Activities (resources, durations, individual responsible for activity, early starts, late starts, early finishes, late finishes, etc.);
- Utility Shutdowns;
- Interrelationships and dependence of activities;
- Planned vs. actual status for each activity;
- Substantial completion;
- Punch list;
- Final inspection;
- Final completion, and
- Float time

The Schedule Duration shall be based on the Contract Time of Completion listed on the Bid Proposal form. Ecology shall not be obligated to accept any Early Completion Schedule suggested by the Contractor. The Contract Time for Completion shall establish the Schedule Completion Date.

If the Contractor feels that the work can be completed in less than the Specified Contract Time, then the Surplus Time shall be considered Project Float. This Float time shall be shown on the Project Schedule. It shall be available to accommodate changes in the work and unforeseen conditions.

Neither the Contractor nor Ecology have exclusive right to this Float Time. It

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belongs to the project.

**5.02 Replace Section 5.02 B – PERMITS, FEES AND NOTICES**

- B. The actual cost of the general building permit (only) and the public utility hook-up fees will be a direct reimbursement to the Contractor or paid *directly to the permitting agency by Ecology. Fees for these permits should not be included by the Contractor in his bid amount*

**Add New Section 5.02 D – PERMITS, FEES, AND NOTICES**

- D. The General Contractor shall submit copies of each valid permit required on the project to Ecology or Ecology’s representative. Nothing in this part shall be construed as imposing a duty upon Ecology or the A/E to secure permits.

**5.07 Replaces 5.07, Section A – SAFETY PRECAUTIONS**

- A. In performing this contract, the Contractor shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies, and equipment; and avoid work interruptions. For these purposes, the Contractor shall:
1. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the Contractor and each subcontractor on the work site. The Contractor shall submit a site-specific safety plan to Ecology or Ecology’s representative prior to the initial scheduled construction meeting.
  2. Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, staging, runways, hoist, construction elevators, shoring, temporary lighting, grounded outlets, wiring, hazardous materials, vehicles, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (International Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC, Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.

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3. Comply with the State Environmental Policy Act (SEPA), Clean Air Act, Shoreline Management Act, and other applicable federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources.
4. Post all permits, notices, and/or approvals in a conspicuous location at the construction site.
5. Provide any additional measures that Ecology determines to be reasonable and necessary for ensuring a safe environment in areas open to the public.
6. Nothing in this part shall be construed as imposing a duty upon Ecology or the A/E to prescribe safety conditions relating to employees, public, or agents of the Contractors.

**5.20 Replace Paragraph B – SUBCONTRACTORS AND SUPPLIERS**

- B. Prior to submitting the first Application for Payment, Contractor shall furnish in writing to Ecology on Ecology provided form(s) the names, addresses, telephone numbers, and Tax Identification Numbers (TIN) of all subcontractors, as well as suppliers providing materials in excess of \$2,500.00. *The Contractor shall designate all subcontractor and supplier participants which they believe to be MBE or WBE owned businesses, or have identified themselves to the Contractor as MBE or WBE, or are Washington State OMWBE certified. The Contractor shall indicate the anticipated dollar value of each MWBE subcontract.* Contractor shall utilize subcontractors and suppliers, which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any subcontractor or supplier to whom Ecology has a reasonable objection, and shall obtain Ecology’s written consent before making any substitutions or additions. Ecology may direct the Contractor, at no additional cost to Ecology, to remove and substitute any subcontractor(s) found to be out of compliance with the “Off-Site Prefabricated Non-Standard Project Specific Items” reporting requirements more than one time as determined by the Department of Labor and Industries and as defined in EHB 2805 that amends RCW 39.04.

**10.11 Add Part 10.11 – MINORITY AND WOMEN’S BUSINESS ENTERPRISES (MWBE) PARTICIPATION**

In Accordance with the legislative findings and policies set forth in Chapter 39.19 RCW the state of Washington encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women’s Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this solicitation or as a subcontractor to a Bidder. Any affirmative action requirements set forth in federal

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regulations or statutes included or referenced in the contract documents will apply. Bidders may contact OMWBE to obtain information on certified firms for potential subcontractors/suppliers.

- A. When referred to in this Contract, the terms Minority Business Enterprise (MBE) and Women’s Business Enterprise (WBE) will be as defined by OMWBE, WAC 326-02-030.
- B. OMWBE has compiled a directory of certified firms. Copies of this directory may be obtained through OMWBE. For information regarding the certification process or the certification status of a particular firm, contact:

OMWBE

Office Location:  
210 11<sup>th</sup> Avenue, SW, Suite 401  
Olympia, WA 98501

Mailing Address:  
P.O. Box 41160  
Olympia, Washington 98504-1160  
Telephone (866) 208-1064 Toll Free

- C. Eligible MWBEs or M/W firms

MWBE firms utilized for this project for voluntary MWBE goals may be certified by Washington State OMWBE or self-identified as minority or women owned (M/W firm).

- D. MWBE Voluntary Goals

Ecology has established voluntary goals for MWBE participation for this project. The voluntary goals are set forth in the Invitation for Bids/Advertisement for Bids.

- E. If any part of the contract, including the supply of materials and equipment, is anticipated to be subcontracted, then prior to receipt of the first payment, Contractor shall submit, pursuant to Section 5.20 A, a list of all subcontractors/suppliers it intends to use, designate whether any of the subcontractors/suppliers are MWBE firms, indicate the anticipated dollar value of each MWBE subcontract, and provide Tax Identification Number (TIN).
- F. If any part of the contract, including the supply of materials and equipment is actually subcontracted during completion of the work, then prior to final

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acceptance or completion of the contract or as otherwise indicated in the contract documents, the Contractor shall submit a statement of participation indicating what MWBEs were used and the dollar value of their subcontracts.

- G. The provisions of this section are not intended to replace or otherwise change the requirements of RCW 39.30.060. If said statute is applicable to this contract then the failure to comply with RCW 39.30.060 will still render a bid non-responsive.
- H. The Contractor shall maintain, for at least three years after completion of this contract, relevant records and information necessary to document the level of utilization of MWBEs and other businesses as subcontractors and suppliers in this contract, as well as any efforts the Contractor makes to increase the participation of MWBEs as listed in Section I below. The Contractor shall also maintain, for at least three years after completion of this contract, a record of all quotes, bids, estimates, or proposals submitted to the Contractor by all businesses seeking to participate as subcontractors or suppliers in this contract. The state shall have the right to inspect and copy such records. If this contract involves federal funds, Contractor shall comply with all record keeping requirements set forth in any federal rules, regulations or statutes included or referenced in the contract documents.
- I. Bidders shall advertise opportunities for subcontractors or suppliers in a manner reasonably designed to provide MWBEs capable of performing the work with timely notice of such opportunities, and all advertisements shall include a provision encouraging participation by MWBE firms. Advertising may be done through general advertisements (e.g. newspapers, journals, etc.) or by soliciting bids directly from MWBEs. Bidders shall provide MWBEs that express interest with adequate and timely information about plans, specifications, and requirements of the contract.
- J. Contractors shall not create barriers to open and fair opportunities for all businesses including MWBEs to participate in all State contracts and to obtain or compete for contracts and subcontracts as sources of supplies, equipment, construction and services. In considering offers from and doing business with subcontractors and suppliers, the Contractor shall not discriminate on the basis of race, color, creed, religion, sex, age, nationality, marital status, or the presence of any mental or physical disability in an otherwise qualified disabled person.
- K. Any violation of the mandatory requirements of this part of the contract shall be a material breach of contract for which the Contractor may be subject to a requirement of specific performance, or damages and sanctions provided by contract, by RCW 39.19.090, or by other applicable laws.

**DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**  
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**10.12 Add Part 10.12 - MINIMUM LEVELS OF APPRENTICESHIP PARTICIPATION**

In accordance with RCW 39.04.320 the State of Washington requires 15% apprenticeship participation for projects estimated to cost one million dollars or more.

- A. Apprentice participation, under this contract, may be counted towards the required percentage (%) only if the apprentices are from an apprenticeship program registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-04).
- B. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530 by phone at (360) 902-5320, and e-mail at [apprentice@lni.wa.gov](mailto:apprentice@lni.wa.gov) , to obtain information on available apprenticeship programs.
- C. For each project that has apprentice requirements, the Contractor shall submit a **“Statement of Apprentice/Journeyman Participation”** on forms provided by Ecology with every request for progress payment. The Contractor shall submit consolidated and cumulative data collected by the Contractor and collected from all subcontractors by the Contractor. The data to be collected and submitted includes the following:
  - 1. Contractor name and address
  - 2. Contract number
  - 3. Project name
  - 4. Contract value
  - 5. Reporting period “Notice to Proceed” through “Invoicing Date”
  - 6. Name and registration number of each apprentice
  - 7. Total number of apprentices and labor hours worked by them, categorized by trade or craft.
  - 8. Total number of journeymen and labor hours worked by them, categorized by trade or craft.
  - 9. Cumulative combined total of apprentice and journeymen labor hours.
  - 10. Total percentage of apprentice hours worked
- D. No changes to the required percentage (%) of apprentice participation shall be allowed without written approval of Ecology. In any request for the change the Contractor shall clearly demonstrate a good faith effort to comply with the requirements for apprentice participation.
- E. Any substantive violation of the mandatory requirements of this part of the contract may be a material breach of the contract by the Contractor. Ecology may withhold payment pursuant to Part 6.05, stop the work for cause pursuant to Part 3.04, and terminate the contract for cause pursuant to Part 9.01.

END OF SUPPLEMENTAL CONDITIONS

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 10 00 – PROJECT SUMMARY**

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**PART 1 – GENERAL**

**1.01 SUMMARY OF WORK**

- A. This project remediates soils contaminated with arsenic from operations of the former Asarco Smelter at eleven (11) single family residential properties in north Everett, Snohomish County, Washington, shown in Figure 1. Work at each property includes, but is not limited to: implementing temporary construction controls for environmental protections; selective demolition of property landscaping and hardscapes; excavating soils contaminated with arsenic; disposing of excavated soils at an approved landfill; importing clean fill material; backfill with imported material, compaction and grading; restoring properties to preconstruction conditions; and landscape and lawn restoration and maintenance, all in accordance with the requirements of the Project Manual.
- B. Scheduling work: Ecology desires that the remediation and restoration work at the following properties be completed within 45 days of the Notice to Proceed:
- 907 Pine Street
  - 929 Pine Street

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**Figure 1: Properties included in the 2017 Cleanup Group**

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- C. Project Location: The Project location for contaminated soils remediation comprises the areas outlined on the map shown in Figure 1. These Properties are all located in Everett, Snohomish County, Washington.
1. The addresses, Snohomish County Tax Parcel numbers, and names of Property Owners for each Property are provided in ***DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION***. The addresses are provided below:

**2017 Cleanup Group Properties**

901 PINE ST	926 MAPLE ST
907 PINE ST	928 MAPLE ST
909 PINE ST	932 MAPLE ST
929 PINE ST	2910 9 <sup>TH</sup> ST
902 MAPLE ST	3002 BUTLER ST
916 MAPLE ST	

**1.02 SUMMARY OF WORK INCLUDED IN THE CONTRACT**

- A. Summary of the Work: The Work includes, but is not limited to:
1. Surveying, mapping and documenting all existing Property features in accordance with the Contract Documents, as a basis for each Property's restoration. This includes, but is not limited to, Property topography, existing structures and site features, all plants and vegetation, and private and public utilities.
  2. Selective demolition of existing sheds, sidewalks, heavily-fractured driveways, or other small structures as specified in the Contract Documents.
  3. Selective removal of existing landscaping features and structures to permit Work.
  4. Proper removal and disposal of debris collected at the Property and material generated by selective demolition.
  5. Where specified in the Contract Documents, removal and disposal of large-diameter trees (diameters greater than twelve (12) inches), including stumps, and root balls.
  6. Surveying to document the existing condition of each Property, including grades and the locations and alignment of landscaping and

**DIVISION 01 – GENERAL REQUIREMENTS**  
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- other site features, in order to restore the Property to its previous condition and/or as specified in the Contract Documents.
7. Identification of shrubs, trees, and other vegetation to be removed from each Property for the purpose of Replacing In Kind during the restoration of each Property, except as otherwise specified in the Contract Documents.
  8. Removal, cleaning, and storage of landscaping materials for each Property for reuse in Property restoration after excavation and backfilling.
  9. Removal and disposal of vegetation and existing sod.
  10. Structural support of decks and other structures as necessary to permit excavation beneath structure, as specified in the Contract Documents.
  11. Excavation of on-site soil with elevated levels of arsenic in the areas and to the depths indicated for each Property in the Contract Documents. Excavated soil shall be removed from the Project Site and disposed of properly. Excavation shall be performed around buildings, structures, paved areas, trees, and shrubs designated to Remain In Place on each Property.
  12. Maintenance, to the degree possible, of public and essential utility services to each Property. Prompt restoration of utility service in the event the Work damages or shuts down utility service.
  13. Repair or Replacement In Kind of all private utilities damaged during the Work, except as otherwise specified in the Contract Documents. These include, but are not limited to, private irrigation/sprinkler systems and private electrical systems.
  14. Maintenance of safe and reasonable access to Property residential buildings for individual Property Owners and their Tenants. Maintain safe and secure working areas to prevent accidental intrusion of children or animals while Work is being performed on each Property.
  15. Importing sufficient clean backfill and topsoil to each Property to return the site grades to their pre-excavation elevation and conditions, except as otherwise specified in the Contract Documents. This shall include surveyed verification that the excavation is performed in accordance with the Contract Documents and earthwork returns each Property to its pre-construction topography and condition.
  16. Placement and compaction of backfill and topsoil.
  17. Fertilization of topsoil.

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**SECTION 01 10 00 – PROJECT SUMMARY**

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18. Placement of new sod in areas of each Property indicated in the Contract Documents.
19. Planting of Replace In Kind shrubs, trees, and other vegetation.
20. Fast revegetation of undeveloped Properties and areas within Properties as specified in the Contract Documents
21. Pouring of concrete driveways area and sidewalks selectively demolished and removed during the Work
22. Replacement, reinstallation and/or reconstruction of landscaping features, such as rock-armored slopes, decks, brick patios and walkways, areas of gravel surfacing, private and public utilities, and landscape decorations and other features for each Property.

**1.03 TIME FOR COMPLETION**

- A. Substantial Completion: The project shall be Substantially Complete 120 calendar days after the date of Notice to Proceed. See **SECTION 01 77 00 – CLOSEOUT PROCEDURES** for requirements for Substantial Completion.
  1. Weekends and legal holidays work restrictions are accounted for and included in the 120 calendar days of contract time allowed for this project.
- B. Final Completion: The Contractor shall achieve Final Completion 60 calendar days after the date of Substantial Completion. See **SECTION 01 77 00 – CLOSEOUT PROCEDURES** for requirements for Final Completion.

**1.04 LIQUIDATED DAMAGES AND ACTUAL DAMAGES**

- A. If the Contractor fails to achieve Substantial Completion in the required contract time, the Contractor authorizes Ecology to deduct liquidated damages from Project Progress Payments in the amount of \$1,000.00 per calendar day until Contractor achieves Substantial Completion.
- B. If the Contractor fails to achieve Final Completion within the time stipulated after Substantial Completion, the Contractor shall be subject to actual damages incurred by Ecology until Contractor achieves Final Completion.

**1.05 WORK OPERATION LIMITATIONS**

- A. Work days for this project are Monday thru Friday, and work hours are from 7:30 am to 4:30 pm. Except in emergency circumstances or authorized by Ecology, Contractor shall not perform Work during weekends (Saturday and

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**SECTION 01 10 00 – PROJECT SUMMARY**

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Sunday), Legal Holidays as defined and designated by the State of Washington Department of Revenue.

1. Contractor shall be responsible for maintaining a safe and stable Project area during all periods of time when Work is not permitted.
  2. Contractor shall be permitted to inspect Work areas from public rights-of-way during periods of time when Work is not permitted for the purpose of verifying site safety and stability, and the security of Project materials and equipment.
  3. Weekends and legal holidays work restrictions are accounted for in the allowed contract time for this project.
- B. Equipment and heavy vehicle operation during a Work day (Monday thru Friday) shall be limited to **7:30 a.m. to 4:30 p.m.**
1. Contractor is permitted to hold meetings at the Project Site and perform site or equipment cleaning and maintenance duties that do not require equipment and heavy vehicle operation for a period not exceeding one (1) hour before and after the Work period limitation specified in this Paragraph.

**1.06 PERMITS, LICENSES AND FEES**

- A. Permits: For Work included in the Contract, Contractor shall obtain all permits from authorities having jurisdiction and from serving utility companies and agencies.

For the Owner provided Construction Stormwater General Permit, we require the Contractor to comply with the permit. The Contractor shall be responsible for implementing the ESC Plan and for fulfilling the objectives stated in the Construction Stormwater General Permit. ESC features shall be provided and maintained to ensure that discharges from the site comply with project's Construction NPDES permit. We also note that there may be substantial penalties levied by the Ecology for failure by the Owner to implement the provisions of the Construction Stormwater General Permit. We note that:

1. Fines up to \$10,000.00 per day can be levied for infractions.
2. Any such fines or penalties incurred by Ecology, as permittee, which are due to the actions of the Contractor, shall be withheld from progress payments until the fines/penalties are paid by the Contractor to Ecology.
3. If the fines/penalties attributable to the Contractor are not paid by Final Completion, Ecology will reduce the Contract Sum by the amount of the fines owed to Ecology.

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- B. Assessments: Costs of assessments and connection fees shall not be included in the Contract Sum. Ecology shall pay all assessments and utility service connection fees, except for those fees that are the responsibility of the Contractor.
- C. Test and Inspection Fees: Contractor shall pay all fees charged by authorities having jurisdiction and from serving utility companies and agencies, for tests and inspections conducted by those authorities, companies and agencies. Ecology shall reimburse Contractor for actual amount of such fees, without mark-up.

For Ecology's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work. Maintain copies at Project Site.

**1.07 CULTURAL RESOURCES**

- A. No cultural resources are known to exist within the Work areas.
- B. Ecology may have a cultural resources observer on other sites to observe excavation work, excavated soils, and subgrades.
- C. The Contractor shall notify Ecology 3 working days in advance of conducting any excavation work or backfill work that covers subgrades, so that Ecology can arrange for the cultural resources observer if necessary.
- D. When a cultural resources observer is on site, the Contractor shall stop excavating as directed by the cultural resources observer to allow the observer to observe and/or sample excavated soils or exposed subgrade.
- E. There always exist the potential for unanticipated discoveries during excavation work. Contractors, workers and Ecology must be aware of clues that signify a potential discovery and what actions must be taken to protect discovery. If Ecology determines it is necessary, mandatory cultural resource training will be provided to all contractor's personnel before excavation begins on the first property. Ecology will provide training. Assume 30 minutes of training for Contractor crew. Contractor needs to be aware of the clues that may signal the presence of cultural resources. They are:
  - 1. Artifacts: Artifacts may be found exposed in open excavations or back dirt piles. These may range from finished tools such as stone pestles, arrowheads or polished bone tools to small pieces of exotic stone such as chert, jasper or obsidian. Historic artifacts include: bottles, cans,

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 10 00 – PROJECT SUMMARY**

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bricks, window glass, square nails or other objects in excess of 50 years age. Do not remove items.

2. Buried features/midden: During excavation exposed sides of excavations may contain buried features such as campfire hearths or shell middens. In cross-section, hearths look like evidence of shallow lenses (saucer shaped) or rock, charcoal and blackened sediment. Middens are buried prehistoric ground surfaces. These are usually thin lenses of dark greasy sediments running horizontally for many feet in different directions. Near coastal shorelines, these middens are characterized by accumulations of broken and burned shellfish remains. Occasionally they may also contain artifacts and/or broken bone fragments.

F. Unanticipated Discovery Procedures:

1. If artifacts or evidence of buried features/midden are discovered during construction, cease work and contact Ecology immediately.
2. Artifacts uncovered during project work shall be the property of Ecology, not the Contractor.

G. Discovery of Human Remains During Construction:

1. If human remains are discovered, work must cease in the area of discovery. Immediately notify Engineer, local law enforcement, and coroner (Reference: RCW 27.44.055).
  - a. City of Everett Police, Non-Emergency Phone: **(425)407-3999**
  - b. Snohomish County Sheriff, Non-Emergency Phone: **(425)388-3393**
  - c. Snohomish County Medical Examiner: Phone: **(425)438-6200**
  - d. Police Emergency No.: **911**

**1.08 PROJECT DRAWINGS**

- A. Construction Drawings – See **Appendix D**.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 13 – ACCESS TO SITE**

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**PART 1 - GENERAL**

**1.01 OVERALL SITE ACCESS CONDITIONS**

- A. Contractor shall confine all operations, including storage of materials, to Ecology-approved areas.
- B. Temporary buildings (e.g. storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Ecology and without additional expense to Ecology. The temporary buildings and utilities shall remain the property of Contractor and shall be removed by Contractor at its expense upon completion of the Work.
  - 1. Ecology does not own property within or in close vicinity to the Project area. In the event property or access rights must be obtained for the location of temporary buildings and utilities, the responsibility to secure all access rights and permissions shall be the Contractor's at no additional cost to Ecology. This includes right-of-way permits and fees for the location of temporary buildings and other facilities within the public right-of way.
- C. Contractor shall use only established roadways or temporary roadways authorized by Ecology. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.
- D. Ownership and control of all materials or facility components to be demolished or removed from the Project Site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project Site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Ecology with a copy of all manifests and receipts evidencing proper disposal when required by Ecology or applicable law.

**1.02 CONTRACTOR'S USE OF SITE AND PREMISES**

- A. Contractor's Use of the Premises: During the construction period, Contractor shall have full use of the outdoor tenant space of each property, provided sufficient access (including handicapped access, if necessary) is maintained from the street to an accessible entryway into each residence.
  - 1. Access is not permitted into the interiors of buildings or enclosed structures on the properties, unless authorized by Ecology in advance.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 13 – ACCESS TO SITE**

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2. Contractor's use of the tenant space shall be limited by the conditions set forth in the Project Manual and the Ecology's right to perform construction operations with its own personnel or to employ separate contractors on portions of the Project.
  3. Contractor's use of surrounding areas shall be subject to approval and direction of the Ecology, including but not limited to traffic of Contractor equipment and vehicles, dust and debris control, and noise control.
- B. Contractor shall provide Ecology a minimum of **eight (8) calendar days of notice** in advance of commencing Work on an individual Parcel, including commencing Work after not performing Work on that Parcel for two (2) weeks. This is necessary to allow for advance notification of Property Owners prior to Work being performed on their property.
- C. Emergency Access: Contractor shall provide pathways, drives, gates, directional signage and other provisions as required by authorities having jurisdiction, for emergency access to Project area(s).
1. Emergency Egress: Maintain all pathways, exitways, drives, gates and other means of egress during construction, as required by authorities having jurisdiction.
  2. Utility Outages and Shutdowns: Schedule utility outages and shutdowns to times and dates acceptable to Ecology, Property Owner and Tenant(s), unless otherwise directed by Ecology. Provide minimum 48 hours notice of all utility outages and shutdowns to Ecology. Duration of outages and shutdowns shall not hinder normal activities of the Property Owner and Tenant(s), except as acceptable in advance by Ecology.

**1.03 ECOLOGY'S USE OF SITE AND PREMISES**

- A. Ecology reserves the right to occupy (Prior Occupancy) and to place and install equipment and furnishings in tenant space prior to Substantial Completion, provided that such occupancy does not interfere with completion of the Work within the Contract Time. Such Prior Occupancy (See **Section 00 72 00 - General Conditions**) by Ecology shall not constitute acceptance of the total Work.
- B. Contractor shall provide Ecology, Ecology's consultants, and others as designated to the Contractor access to the Work in progress wherever located.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 13 – ACCESS TO SITE**

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1. Ecology field representatives shall be authorized to enter the Project Site to observe and document the Work activities and coordinate communications and activities involving Contractor, Ecology, Ecology consultant(s), Property Owner(s), and Tenant(s).
  2. The number of Ecology field representatives shall be determined at Ecology's discretion depending on the type and sensitivity of the Work being performed.
  3. Ecology will identify Ecology field representatives to Contractor as necessary during Work.
  4. Contractor shall provide Ecology field representatives all reasonable access to the Work to photograph, document, measure, sample, or other activities as required by Ecology.
  5. Unless Ecology notifies Contractor otherwise, Ecology field representatives will not have the authority to direct, manage, supervise, administer, alter, and/or terminate Work.
    - a. No verbal statement made by any Ecology field representative in relation to the Work, the Contract Documents, the Contractor, and/or the physical conditions pertaining to the Project Site and Work shall be binding on Ecology.
- C. Property Owner(s) and/or Tenant(s) shall not be considered Ecology field representatives

**1.04 PROPERTY OWNER'S AND TENANT'S USE OF SITE AND PREMISES**

- A. Most of the properties in the Project Site are developed with single-family or multi-family residences. During the Contract Time, these residences remain in the private ownership of the Property Owners. The Property Owners and/or their Tenants reserve the right to occupy and continue to occupy their residence during construction.
- B. Property Owners reserve the right to place and install equipment and furnishings in tenant space of their individual property prior to Substantial Completion, provided that such occupancy does not interfere with completion of the Work within the Contract Time and can be performed safely.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 14 13 – ACCESS TO SITE**

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**3.01 PROTECTION OF ON-SITE PROPERTY, EQUIPMENT, AND MATERIALS**

- A. Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project Site. Materials and equipment may be stored on the premises subject to approval of Ecology. When Contractor uses any portion of the Project Site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.
- B. Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Ecology any damage or loss that may occur, except damages or loss caused by the acts or omissions of Ecology.
- C. Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Ecology any such damage or loss that might occur, to the extent such damages or loss are caused by the acts or omissions of Contractor, or any Subcontractor.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 18 00 – PROJECT UTILITY SOURCES**

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**PART 1 - GENERAL**

**1.01 LIMITED AVAILABILITY**

- A. Due to the present occupancy of properties comprising the Project Site by Property Owners and/or Tenant(s) who are not Ecology, it is not possible for Ecology to furnish utility access to the Contractor. Utilities provided to each property in Project Site are further private in nature and subject to Property Owner contracts and billing that Ecology has no access to or authority over.
1. Contractor **shall not** connect to any on-site utility service provided to Property Owner and/or Tenant(s) unless Ecology approves in writing in advance.
  2. Contractor shall anticipate furnishing all temporary utility needs to complete the Work. This shall include, but not be limited to, electricity and water for dust control and irrigation.
- B. Contractor is permitted by Ecology to install temporary connections and distribution lines to public utilities independent of utilities provided to the existing Property Owner and/or Tenant(s), as negotiated between Contractor and the utility service provider.
1. Where such temporary connections can be made, the utility service consumed shall be charged to and paid for by the Contractor.
  2. Contractor shall, at its expense and in a skillful manner satisfactory to Ecology and the utility service provider, install and maintain the temporary connections and distribution lines, together with appropriate protective devices and all meters required to measure the amount of each utility used.
  3. Prior to the date of Final Completion unless otherwise authorized by Ecology in writing, Contractor shall remove all temporary connections, distribution lines, meters and associated equipment and materials.

**1.02 COMBINED SEWER**

- A. Access points into the combined sewer system for storm water disposal purposes are found in the adjacent city streets.
- B. Contractor shall obtain all required permissions from the City of Everett for storm water disposal from the Project site during Work, in accordance with City of Everett standards and the Project NPDES Permit.

**DIVISION 01 – GENERAL REQUIREMENTS  
SECTION 01 18 00 – PROJECT UTILITY SOURCES**

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**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES**

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**PART 1 – GENERAL**

**1.01 RELATED WORK DESCRIBED ELSEWHERE**

- A. The provisions and intent of the Contract, including the **Section 00 72 00 - General Conditions** and **Section 00 73 00 - Supplemental Conditions** apply to this work as if specified in this section. Work related to this section is described throughout these Specifications.
- B. Individual submittals are required in accordance with the pertinent sections of these Specifications.

**1.02 PAYMENT PROCEDURES**

- A. “Pencil Copies” of the monthly pay estimates shall be presented to Ecology or Ecology’s Representative not more than three (3) days prior to the anticipated submittal of the “formal” pay estimate. The Contractor shall hold a meeting with Ecology or Ecology’s Representative, required subcontractor representatives to discuss the quantities to be included in the pay estimate for the respective month. Upon agreement of the quantities performed, the Contractor shall complete the pay estimate for submittal.
- B. Monthly pay estimates shall clearly identify the work performed for the given time period based on a percentage of work completed for lump sum bid items and actual quantities installed for unit price items.
- C. Prior to submitting pay estimates to Ecology, the Contractor and Ecology or Ecology’s Representative shall review the work accomplished to agree upon percentage of Work completed using the project’s schedule of values.
- D. Following review, the Contractor shall prepare an original pay estimate with complete supporting documentation attached and submit electronically (preferred method in support of Ecology’s “Green” contracting practices) to the attention of Joe Ward, Ecology Contracts Officer. The pay estimate shall be emailed to:

Email: [joe.ward@ecy.wa.gov](mailto:joe.ward@ecy.wa.gov)

Mail address:

Attn: Joseph Ward, P.E.

Washington State Department of Ecology

Toxics Cleanup Program, PO Box 47600

Olympia, WA 98504

- E. The Ecology Contracts Officer will review the amount invoiced to verify costs are in accordance with the Ecology Project Manager’s recommendations, authorized scope of work, proposed rates, and the terms and conditions of the Contract. Once verified, the Ecology Contracts Officer

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES**

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approves the pay estimate for payment and forwards to Ecology's finance department for processing. Payments for approved pay estimates shall be made within thirty (30) days of receipt by the Ecology Contracts Officer, unless the pay estimate has been returned to the Contractor for revision(s) and resubmittal. Pay estimates requiring revision(s) will be returned to the Contractor per Article 6.04 Progress Payments of **SECTION 00 72 00 – GENERAL CONDITIONS**.

**1.03 PAYMENT PRICING**

- A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.
- B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.
- D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.
- E. Ecology reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes will govern the compensation.

**1.04 MEASUREMENT FOR PAYMENT**

- A. Measurement for payment shall be in accordance with the schedules below and shall be based upon: 1) Lump Sum/Known Quantity bid items as stipulated in the Bid Form. Payment shall be considered full compensation for furnishing all labor, materials and equipment to complete the Work specified, to include all direct, indirect and overhead costs, and profit.
- B. **Trench Excavation Safety Provisions:** If any of Lump Sum or Unit Price Bid Item contains any work which requires trenching exceeding a depth of four feet, all costs for trench safety shall be included in the appropriate Bid items for adequate trench safety systems as necessary, in compliance with Chapter 39.04 RCW, 49.17 RCW and WAC 296-155-650.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES**

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- C. In measuring all acceptably completed items of work, Ecology will:
1. Use United States standard measure;
  2. Make all measurements as described in this section, unless individual specifications require otherwise;
  3. Follow methods generally recognized as conforming to good engineering practice;
  4. Conform to the usual practice of carrying measurements and computations to the proper significant figure or fraction of units for each item; and
  5. Measure horizontally or vertically (unless otherwise specified).
- D. The terms listed below shall be defined as follows in all measurements under this section:
1. “Lump Sum” (when used as an item of payment): complete payment for the work described for that item in the contract. Lump sum payments also may be made based on percent of completion. Minor adjustments to the work shall be assumed to be incidental with regard to global lump sum work items such as health and safety, survey, mobilization, and other similar items.
  2. “Ton”: 2,000 pounds of weight.
  3. “Gallon”: measurement shall be in U.S. gallons, as measured by the licensed disposal facility at the time of disposal.
  4. “Linear Foot”: measured parallel to the structure’s base or foundation, unless the Plans require otherwise.
  5. “Hour”: hourly rate for equipment and personnel, including fees, taxes, and any other incidentals. Prevailing wage rates shall apply for the work in this Contract.
- E. For each item listed below, Ecology will use the method of measurement described.
1. Standard Manufactured Items: measured by the manufacturer’s identification gage, unit weight, section dimension, etc. Ecology will accept manufacturing tolerances set by each industry unless cited specifications require more stringent tolerances.
- F. No measurement will be made for:
1. Work performed or materials placed outside lines shown in the Plans or set by Ecology;

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES**

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2. Materials wasted, used or disposed of in a manner contrary to the contract;
  3. Rejected materials (including those rejected after placement if the rejection resulted in the Contractor's failure to comply with the contract);
  4. Hauling and disposing of rejected materials;
  5. Material remaining on hand after the work is completed; or
  6. Any other work or material contrary to any contract provision.
- G. Lump Sum/Known Quantity, any alternate bid items, and any Unit Price Bid items are identified in **SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES**
- H. **SECTION 00 41 43 – SUMMARY OF PAY ITEMS AND QUANTITIES:** within the breakdown of work for the **Total Base Bid**, ECOLOGY provides basis of bid quantities for specific items of work for bidders to use in the preparation of their bids for this project. The basis of bid quantities are estimated quantities for the work described for all bidders to use. After contract award, as work progress on the project, there may be underruns or overruns in the basis of bid quantities provided by ECOLOGY, which result in an adjustment (either an increase or decrease) to the contract amount. This adjustment to the contract amount due to changes in the basis of bid quantities for excavation and fill will be addressed by **Unit Prices** for changes that are up to 15% of the basis of bid quantity. Adjustments to the contract sum for overruns or underruns in excavation and fill quantities that are above 15% of the basis of bid quantities shall be negotiated in accordance with **Section 00 72 00 – General Conditions, Part 7 - Changes**. Unit price bid items listed as "Each" shall be used for all quantity adjustments to the basis of bid quantity provided for those items.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 22 00 – UNIT PRICES**

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**PART 1 - GENERAL**

**1.01 GENERAL**

- A. All Work shown in the Contract Documents shall be paid on a lump sum basis. Unit Prices shall be used only in the determination of payment due the Contractor in the event of a modification to the Contract Sum brought about by the necessity of adding or deleting Work which is an addition or subtraction to that shown in the Contract Documents.

**1.02 DEFINITIONS**

- A. Unit Price, stated on the Bid Proposal Form, is a price per unit of measurement for materials, labor, and all other aspects of the specific element of Work added to or deducted from the Contract Sum by appropriate modification, if the quantities of Work required by the Contract Documents are increased or decreased. If accepted, the unit prices shall be in effect for all additional material required to be added to or material deducted from the quantities in the Contract Documents, and for Excavation and Fill, the unit prices apply for overruns and underruns up to 15% of the basis of bid quantities provided in SECTION 00 43 43 – SUMMARY OF PAY ITEMS AND QUANTITIES. Adjustments to the contract sum for overruns or underruns in excavation and fill quantities that are above 15% of the basis of bid quantities shall be negotiated in accordance with SECTION 00 72 00 – GENERAL CONDITIONS, Part 7 – Changes. Unit price items listed as “Each” shall be used for all quantity adjustments to the basis of bid quantity provided for those items.
- B. Actual quantities shall be determined during construction and may result in a net deletion from the Contract Sum and subsequent credit to Ecology, or an addition to the Contract Sum.
1. Adjustments to the Contract Sum shall be by Change Order based on the Unit Prices.
- C. Unit Prices shall by full compensation, except for overhead and profit, to provide labor, material, cost for delivery, equipment, installation, temporary facilities and coordination/ supervision to complete all the Work described for the Unit Price. Overhead and profit shall be added as part of the Change Order process in accordance with SECTION 00 72 00 – GENERAL CONDITIONS, Part 7 – Changes. Unit Prices shall not include applicable State and Local Sales Taxes, but shall include all other taxes, including but not limited to, income, excise, and business and occupation taxes.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 22 00 – UNIT PRICES**

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**1.03 UNIT PRICE REFERENCES**

- A. Refer to Sections of the Specifications referenced in this Section for Work that requires establishment of Unit Prices. Methods of measurement and payment for Unit Prices are specified in those referenced Sections. If not specifically noted in other Sections, measurements taken for the purposes of quantities for calculation are always to be measured as units-in-place.
1. Ecology has the right to reject Contractor measurements and have an independent surveyor acceptable to both parties verify quantities.
- B. Project Unit Prices:
1. “Excavation and Offsite Disposal” of contaminated soil (designated UB-1 in Contract Documents): See **SECTION 31 23 16 – EXCAVATION.**
  2. “Imported Clean Fill” (designated UB-2 in Contract Documents): See **SECTION 31 23 23 – FILL.**
  3. “Tree Removal” (designated UB-3 in Contract Documents): See **SECTION 31 11 00 – CLEARING AND GRUBBING.**

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 25 00 – SUBSTITUTION PROCEDURES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION**

- A. Requests for changes in products, materials, means and methods, scheduling changes, and/or equipment construction required by Contract Documents that may be proposed by the Contractor after Award of the Contract are considered Substitution requests.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTAL**

- A. Requests for substitution submitted by the Contractor will be considered by Ecology if received no later than thirty (30) calendar days after Notice to Proceed or no sooner than ten (10) working days before the use of the substitution on a specific property in the Project Site after Work has commenced.
  - 1. Requests for substitution that do not comply with this Specification may be considered or rejected at the sole discretion of Ecology.
- B. Contractor shall submit each request for substitution in writing for consideration to Ecology.
  - 1. Submit request for substitutions in the form and in accordance with **SECTION 01 33 00 – SUBMITTAL PROCEDURES**.
  - 2. Email is acceptable for submitting requests for substitutions in writing.
- C. In the submitted request for substitution, the Contractor shall identify the product, or the fabrication or installation method to be replaced for each request, the related Project Manual Section(s) and complete documentation showing compliance with the requirements for substitutions. Where appropriate, the following information shall be included:
  - 1. Product Data, including drawings and descriptions of Products, fabrication and installation procedures.
  - 2. Samples, where applicable or requested.
  - 3. A detailed comparison of significant qualities of the proposed substitution with those of the Work as specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
  - 4. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 25 00 – SUBSTITUTION PROCEDURES**

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- Ecology and separate contractors that will become necessary to accommodate the proposed substitution.
5. A statement indicating the substitution's effect on the Contractor's Construction Progress Schedule compared to the schedule without approval of the substitution. Also indicate the effect of the proposed substitution on overall Contract Time.
  6. Cost information, including the net change, if any, in the Contract Sum.
  7. Certification by the contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
- D. Within two (2) calendar weeks of receipt of the request for substitution, Ecology will request additional information or documentation necessary for evaluation of the request.
1. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name in the Contract Documents.
  2. If applicable, formal acceptance of a change in the Contract Documents will be requested in accordance with Part 7 – Changes of **SECTION 00 72 00 – GENERAL CONDITIONS**.

**1.04 MINIMUM CONDITIONS FOR CONSIDERATION**

- A. The Contractor's substitution request will be received and considered by Ecology when one or more of the applicable conditions in this Paragraph are determined by Ecology to be satisfactory.
1. Extensive revisions to Contract Documents are not required.
  2. Proposed changes are in keeping with the general intent of Contract Documents.
  3. The request is timely, fully documented and properly submitted.
  4. The request is for a Product with an "or equal" clause or similar language in the Contract Documents.
  5. There were no bidder requested substitutions for this Product or method approved prior to the Award of the Contract. These approved Products must all meet the substitution conditions before any new Products or methods will be approved.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 25 00 – SUBSTITUTION PROCEDURES**

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6. The specified Product or method of construction cannot be provided within the Contract Time. The request will not be considered if the Product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
  7. The specified Product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
  8. A substantial advantage is offered Ecology, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities Ecology may be required to bear. Additional responsibilities for Ecology may include additional compensation to the A/E for redesign and evaluation services, increased cost of other construction by Ecology or separate contractors, and similar considerations.
  9. The specified Product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
  10. The specified Product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
  11. The specified Product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution can be coordinated.
- B. The determination that a substitution is satisfactory is solely at the discretion of Ecology and may require Ecology to negotiate acceptance of the substitution with the applicable Parcel Property Owner(s).
1. Ecology reserves the sole discretion to reject any proposed substitution that is not acceptable to the Property Owner of the Parcel affected by the substitution at no additional cost to Ecology.
- C. The Contractor's submittal and Ecology's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 26 13 – REQUESTS FOR INTERPRETATION (RFI)**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION**

- A. A document submitted by the Contractor requesting clarification of a portion of the Contract Documents is hereinafter referred to as a Request for Interpretation (RFI).
- B. Should the Contractor be unable to determine from the Contract Documents the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of Work is described differently at more than one place in the Contract Documents; the Contractor shall request Ecology make an interpretation of the requirements of the Contract Documents to resolve such matters. The Contractor shall comply with procedures specified in this Section to make RFIs.
- C. The Contractor shall prepare and maintain a log of RFIs. At any time requested by Ecology, the Contractor shall furnish copies of the log showing all outstanding and closed RFIs.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 SUBMISSION**

- A. RFIs shall be prepared and submitted in accordance with the following:
  - 1. RFIs shall be provided in writing to Ecology by the Contractor.
  - 2. Each RFI shall be given a discrete, consecutive number.
  - 3. Each page of the RFI and each attachment to the RFI shall bear the Project name, date, RFI number, and a descriptive title.
  - 4. Each RFI shall include explicit reference to which individual Property or Properties the RFI refers to, where applicable.
  - 5. Each RFI shall contain a clear and legible statement of the Work element where interpretation is requested, including specific reference(s) to the pertinent Sections and Paragraphs of the Project Documents. This statement should summarize clearly the reasons why the RFI is being submitted by the Contractor.
  - 6. Contractor shall sign all RFIs attesting to good faith effort to determine from the Contract Documents the information requested for interpretation.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 26 13 – REQUESTS FOR INTERPRETATION (RFI)**

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7. Contractor shall be responsible for delays resulting from the necessity to resubmit an RFI due to insufficient or incorrect information presented in the RFI.
- B. Contractor shall carefully study the Contract Documents to ensure that information sufficient for interpretation of requirements of the Contract Documents is not included.
1. RFIs that request interpretation of requirements clearly indicated in the Contract Documents will be returned without interpretation.
  2. Frivolous RFIs shall be subject to reimbursement from Contractor to Ecology for costs incurred in review of the frivolous RFIs by Ecology, the A/E, or other consultants and design professionals engaged by Ecology. Assessment of frivolous RFIs shall be at the sole discretion of Ecology.
- C. Subcontractor-Initiated and Supplier-Initiated RFIs: RFIs from subcontractors and material suppliers shall be submitted through, be reviewed by, and be attached to an RFI prepared, signed, and submitted by the Contractor. RFIs submitted directly by Subcontractors or material suppliers shall be returned unanswered to the Contractor.
1. Contractor shall review all Subcontractor- and Supplier-Initiated RFIs and take actions to resolve issues of coordination, sequencing, and layout of the Work.
  2. RFIs submitted to request clarification of issues related to means, methods, techniques, and sequences of construction or for establishing trade jurisdictions and scopes of subcontracts shall be returned without interpretation. Such issues are solely the Contractor's responsibility.
  3. Contractor shall be responsible for delays resulting from the necessity to resubmit an RFI due to insufficient or incorrect information presented in the RFI.
- D. In all cases in which RFIs are issued to request clarification of issues related to means, methods, techniques, and sequences of construction, the Contractor shall furnish all information required for Ecology to analyze and/or understand the circumstances causing the RFI and prepare a clarification or direction as to how the Contractor shall proceed.
1. If information included with this type of RFI by the Contractor is insufficient, the RFI will be returned unanswered.
- E. Ecology shall review RFIs and respond to the Contractor ten (10) business days of receipt. RFIs received after 12:00 noon shall be considered received on the next regular working day for the purpose of establishing the start of the ten (10) day response period.

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**SECTION 01 26 13 – REQUESTS FOR INTERPRETATION (RFI)**

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- F. RFIs shall not be used for the following purposes:
1. To request approval of submittals (refer to **SECTION 01 33 00 – SUBMITTAL PROCEDURES**).
  2. To request approval of substitutions (refer to **SECTION 01 25 00 – SUBSTITUTION PROCEDURES**).
  3. For Change Order Proposals (refer to Part 7 - Changes in **SECTION 00 72 00 – GENERAL CONDITIONS**).
  4. To request different methods of performing Work than those specified in the Contract Documents.
- G. In the event the Contractor believes a response to an RFI by Ecology shall result in additional cost or time, the Contractor shall not proceed with the Work indicated in the RFI until authorized to proceed by Ecology. Contractor shall respond as specified in Part 7 - Changes in **SECTION 00 72 00 – GENERAL CONDITIONS**.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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**PART 1 – GENERAL**

**1.01 PROJECT SUPERVISION**

A. Contractor's Supervision

1. The Contractor shall provide the services of a full-time, experienced and qualified construction field superintendent who shall be assigned to the job during the course of the work. The person designated as construction field superintendent shall have direct charge of the work and shall be authorized to accept and execute all orders and directions issued by Ecology. The construction field superintendent shall be readily available during normal work hours for consultation with Ecology and be physically on the job Site during Site activities. The construction field superintendent shall not be removed or replaced during the entire course of the contract work without the written approval of Ecology.
2. The Contractor shall manage the project. The Contractor shall inform the Ecology Project Manager (and Ecology or Ecology's Representative) with information throughout the work so that they can make informed and effective decisions.
3. Unprofessional behavior of any kind by contractor and subcontractor personnel is unacceptable and will not be tolerated on this project.
  - a. Ecology will direct the Contractor to immediately remove any contractor or subcontractor personnel from the project, for the duration of the project, that exhibit unprofessional behavior to Ecology staff, Ecology representatives, the property owner, or general public, and replace with competent personnel that are acceptable to Ecology.

B. Upon notification by Ecology, the Contractor's failure to immediately address and correct any displays of unprofessional behavior by its personnel or by subcontractor personnel, or to remove personnel exhibiting such behavior when directed to do so by Ecology is grounds for termination of the contract for cause. ECOLOGY SUPERVISION

1. Ecology's Project Manager or Ecology's Representative (consultant) will represent Ecology on the site.

**1.02 MEETINGS**

The Contractor's project manager and/or project superintendent shall attend, at a minimum, the following meetings with Ecology or Ecology's Representative:

A. PUBLIC MEETINGS

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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1. Contractor shall participate in public meetings and conferences scheduled and conducted by Ecology. Ecology will coordinate with the Contractor for all these meetings to determine appropriate representation, discuss the meeting agenda, and minimize impacts and consequences on the Work.
  - a. Public meetings are anticipated on or near the beginning of the Contract Time.
  - b. A public meeting is possible at or near the end of the Contract Time, at the discretion of Ecology.
  - c. Contractor is not responsible for preparing and distributing either agenda or minutes for public meetings and conferences scheduled and conducted by Ecology.

**B. PRECONSTRUCTION MEETING**

1. Following the award, Ecology will notify the selected bidder of the time and date of a preconstruction meeting. The preconstruction meeting will be conducted in Everett and may include a site visit at each property. The following are requested to attend and suggested agenda:
  - a. Ecology:
    - 1) Ecology Contracts Manager (as required)
    - 2) Ecology Project Manager
    - 3) Ecology's Representative-Ecology's A&E (Consultants)
  - b. Contractor's Representatives:
    - 1) Superintendent
    - 2) Contract Administrator (if required)
    - 3) Major Subcontractors (as required)
    - 4) Major Suppliers (as required)
  - c. Representatives of the City of Everett Public Works Department and other representatives as determined by the City of Everett.
  - d. Suggested Agenda:
    - 1) Communications and routing
    - 2) Schedule of Values
    - 3) Execution of the Contract
    - 4) Discussion of the General Conditions
    - 5) Discussion of the Special Conditions

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**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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- 6) Discussion of the Project Specific Requirements
- 7) Discussion of the Technical Specifications
- 8) Change Order Process
- 9) Terms and Conditions of Payment
- 10) Use of the premises in the Project area
- 11) Responsibility for temporary facilities, controls, and erosion best management practices
- 12) Parking availability
- 13) Work and temporary storage areas
- 14) Security
- 15) Progress cleaning
- 16) Working hours
- 17) Topics requested by the City of Everett, Contractor, or Ecology
- 18) Site visit to each property
- 19) Other issues, if any

**C. WEEKLY PROGRESS MEETINGS**

1. Ecology will schedule and administer weekly progress meetings throughout progress of the work. Unless a different day and time is agreed to, progress meetings will likely take place on Tuesdays between the hours of 9:00 am and 4:00 pm.
2. Ecology will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, record minutes and distributes copies within 5 working days to the Contractor, meeting participants, and others affected by decisions made.
3. Attendance is required for the Contractor's job superintendent, major subcontractors and suppliers, Ecology, and others as appropriate to the agenda topics for each meeting.
4. Standard Agenda
  - a. Review and correct or approve minutes of the previous progress meeting.
  - b. Review site safety and health issues identified since the last meeting by Contractor, Ecology, Ecology's field representatives, Property Owners and/or Tenants, and the public.

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**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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- c. This may include NPDES permit compliance, erosion control, or other safety and health issues.
  - d. Review items of significance that could affect progress of the Work.
  - e. Topics for discussion as appropriate to the status of the Work
  - f. Contractor's Construction Progress Schedule
  - g. Progress since last meeting
  - h. Determination whether each activity is on time, ahead of schedule, or behind schedule in relation to the Contractor's Construction Progress Schedule
  - i. Determine how construction behind schedule will be expedited and secure commitments from parties involved to do so
  - j. Discuss schedule revisions to ensure that current and subsequent Work activities will be completed within the Contract Time
  - k. Review status of Submittals, Substitutions, RFIs, Work Change Directives, Change Orders, Schedule Modification Requests, Project Record, and other documents under preparation or review by either Contractor or Ecology.
  - l. Review present and future needs of each entity present, including the following:
    - 1) Interface requirements
    - 2) Sequence of operations
    - 3) Status of submittals
    - 4) Deliveries
    - 5) Off-site fabrication
    - 6) Access
    - 7) Site utilization
    - 8) Temporary facilities and controls
    - 9) Work hours
    - 10) Progress cleaning
    - 11) Quality and work standards
    - 12) Change Orders and RFIs
    - 13) Documentation of information for payment requests.
- D. Special Meetings

**DIVISION 01 – GENERAL REQUIREMENTS**  
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1. Contractor's project manager and/or project superintendent shall attend special meetings that may be held at Ecology's request when a problem or deficiency is present or likely to occur. The purpose of these meetings will be to define and discuss a problem or recurring work deficiency, review alternative solutions, and identify a plan to efficiently and effectively resolve the problem or deficiency.
2. Contractor's project manager and/or project superintendent shall attend other meetings at Ecology's request to coordinate Contractor's activities with related work being conducted by Ecology.
3. Contractor's project manager and/or project superintendent's attendance at off-site meetings with regulatory agencies or other parties shall be arranged as necessary. Contractor shall participate in off-site meetings at no additional cost to Ecology.
4. Prior to the start of excavation at a specific property, the Contractor's project manager and/or project superintendent, Ecology, and the property owner/tenants shall meet at the subject property to review the proposed work and confirm specific details, requirements, and schedule.

**E. HEALTH AND SAFETY MEETINGS**

1. Contractor shall conduct health and safety meetings for Contractor personnel as required by Contractor's health and safety plan, including but not limited to daily tailgate safety meetings. Ecology may attend Contractor's health and safety meetings, as needed, to be aware of work conditions or health and safety concerns that could affect the normal business activities of Ecology's or Ecology's Representative's employees or tenants, or the coordination or execution of work under other contracts.

**1.03 NOTIFICATION POINTS**

- A. The Contractor shall notify Ecology at all schedule /work milestone points prior to proceeding further, to allow inspection of the Contractor work progress. Ecology or Ecology's representative may request additional Notification points based on review of the above information provided by the Contractor.

**1.04 CONSTRUCTION SCHEDULE SUBMITTALS**

- A. Project Schedule: The Contractor shall submit a Preliminary Project Schedule at least 14 days prior to mobilization. The schedule shall be a Critical Path Method (CPM) schedule developed by the Precedence Diagramming Method (PDM). The schedule shall be used to evaluate

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**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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progress of work based on the Schedule of Values. The schedule shall show the Contractor's planned order and interdependence of activities, and sequence of work. The schedule shall be updated monthly or as often as requested by Ecology. The Project Schedule shall display the following information, at a minimum:

1. Date of Notice to Proceed;
  2. Activities (resources, durations, individual responsible for activity, early starts, late starts, early finishes, late finishes, etc.);
  3. Utility shutdowns;
  4. Interrelationships and dependence of activities;
  5. Planned vs. actual status for each activity;
  6. Preliminary punch list for each property;
  7. Substantial completion;
  8. Punch list;
  9. Final inspection;
  10. Final completion; and
  11. Float time.
- B. The Contractor shall update the Progress Schedule on a weekly basis, and bring the required number of copies to the Weekly Progress Meeting. At a minimum, schedule updates shall reflect the following information:
1. The actual duration and sequence of as-constructed Work activities, including changed Work.
  2. Approved time extensions.
  3. Unresolved requests for time extensions shall be reflected in the Schedule Update by assuming no time extension will be granted, and by showing the effects to follow-on activities necessary to physically complete the project within the currently authorized time for completion.
  4. Any construction delays or other conditions that affect the progress of the Work.
  5. Any modifications to the as-planned sequence or duration of remaining activities.
  6. Any modifications to the Critical Path.
  7. The Physical Completion of all remaining Work in the remaining Contract time.

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**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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- C. Refer to **Section 00 72 00 - General Conditions** and **Section 00 73 00 - Supplemental Conditions**, Part 3.02 – Construction Schedule for additional requirements.
- D. **Schedule of Values**: Provide a detailed cost break down of lump sum bid items to Ecology for approval. Furnish a fair evaluation of actual cost of each Work item listed. This will be used in processing Contractor's request for partial payment. Submittal of breakdown does not affect the Contract terms. The schedule of values shall at a minimum address, for each property, each work activity required to clean up and restore the property. Costs for any permit shall be listed separately.

**1.05 CONSTRUCTION SCHEDULE REGARDING SUBMITTALS**

- A. The Contractor is hereby notified that Ecology will not defer liquidated damages or waive specified requirements due to project delays resulting from Contractor actions or inaction (including Contractor insufficient planning) or other causes, including but not limited to:
  - 1. Contractor's late or inadequately packaged submittals, or submittals that require more than two Ecology reviews before approval by Ecology.
  - 2. The Contractor shall specifically note that restoration activity is seasonally dependent and these specifications may contain various requirements with fixed calendar dates and should the Contractor fail to complete the work as indicated by these dates, then the Contractor may be required to complete alternate or supplemental work. Examples include 1) restoring the remediation area with sod should the allowed latest date for seeding pass, and 2) implementing additional TESC measures for enhanced protection of the work due to late seeding or sodding, in order to stabilize the site for the winter.
  - 3. The Contractor shall specifically note that requirements for import soil (including topsoil) require the Contractor to identify and test multiple materials from multiple suppliers to obtain material that meets the specifications, and the Contractor shall note that import soil materials require on-going periodic testing during supply (not just an initial submittal for approval). Ecology has completed reasonable due diligence in identifying material specifications, and identifying suppliers that may meet the specifications; however, the Contractor is cautioned that the quality of soils (particularly topsoil and compost) provided by any given supplier can vary over time, particularly with respect to the presence of chemical contaminants, changes in component gradation or component blended ratios. The Contractor shall include material testing as line items in the project schedule.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION**

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**1.06 DIRECTION FROM ECOLOGY**

- A. All direction regarding the project shall be obtained from Ecology.

**1.07 ECOLOGY WORK CHANGE DIRECTIVES**

- A. Work Change Directives are the written form of communication Ecology shall use to direct changes, additions, and/or subtractions to the Project Scope in accordance with Part 7 – Changes of **SECTION 00 72 00 – GENERAL CONDITIONS** for this Project.
1. Use of Work Change Directives shall include Ecology changes to scheduled Work (such as Suspension of Work for Cause or Convenience) or other coordination with Property Owners, Tenants, municipal officials, and/or other Persons.
  2. Work Change Directives shall be clearly labeled as such by Ecology, to distinguish these documents from all other written communications between Ecology, Property Owner(s), Tenant(s), A/E, Contractor and Subcontractor(s), etc.
- B. Receipt of a Work Change Directive from Ecology shall be considered a request for a Change Order Proposal from Contractor. Contractor shall comply with this request as required in Part 7 – Changes of **SECTION 00 72 00 – GENERAL CONDITIONS**.
1. For the purposes of determining Change Order Proposal deadlines as required in this Section of the General Conditions, Contractor shall assume Notice has been given by Ecology starting the next business day after the date on the Work Change Directive memo.
  2. As a Work Change Directive is a change to the Contract Documents, Contractor shall still provide Ecology a Change Order Proposal even if no equitable adjustment to Contract Sum and/or Contract Time will be requested by Contractor.

**PART 2 - PRODUCTS - NOT USED**

**PART 3 - EXECUTION - NOT USED**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. This Section specifies administrative general and procedural requirements for submittals required for performance of the Work.
- B. Additional requirements for administrative submittals are provided in other Sections of the Contract Documents. Such submittals include, but are not limited to:
  - 1. Permits.
  - 2. Applications for Payment.
  - 3. Contractor's Construction Progress Schedule and Progress Schedule updates.
  - 4. Guarantees.
  - 5. Representative product samples.
  - 6. Substitutions.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTALS**

- A. The Contractor shall submit the Contractor's Schedule of Submittals a minimum of two (2) weeks prior to the start of excavation and once every week thereafter at the weekly construction meeting with updates to reflect the progression of the Project.
  - 1. The Contractor shall prepare and keep current, for review by Ecology, the Contractor's Schedule of Submittals which shall be coordinated with the Contractor's Project Schedule.
  - 2. The Contractor's Schedule of Submittals shall provide sufficient time for Ecology submittal review as described in this Section.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 SUBMITTAL PROCEDURES**

- A. Contractor shall coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal to Ecology

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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sufficiently in advance of performance of related construction activities to avoid delay.

1. Contractor shall coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
  2. Contractor shall coordinate transmittal of different types of submittals for related elements of the Work so processing shall not be delayed by the need to review submittals concurrently for coordination.
    - a. Ecology reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
  3. Contractor shall allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmits.
    - a. Allow two (2) weeks for initial Ecology review.
      - 1) Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
      - 2) Ecology shall promptly advise the Contractor when a submittal being processed must be delayed for coordination.
    - b. If an intermediate submittal is necessary, the process shall be the same as the initial submittal.
    - c. Allow two (2) weeks for reprocessing each submittal.
    - d. No extension of Contract Time will be authorized because of failure to transmit submittals to Ecology sufficiently in advance of the Work to permit processing.
- B. During submittal preparation, place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Include the following information on the label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Ecology as the Project Owner.
    - d. Name and address of Contractor.
    - e. Name and address of Subcontractor(s), if appropriate.
    - f. Name and address of supplier(s), if appropriate.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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- g. Name of manufacturer(s), if appropriate.
    - h. Section number(s) and title(s) of appropriate Specification(s)
    - i. References, as appropriate, to other shop drawings, submittals or other documentation previously provided by Contractor to Ecology.
- C. Package each submittal appropriately for transmittal and handling. Each submittal shall be transmitted directly by Contractor to Ecology. Submittals received from sources other than the Contractor shall be returned without action.
  - 1. Contractor shall review all submittals transmitted to Ecology, and mark in submittal the Contractor's review and approval.
  - 2. Contractor shall record all deviates from Contract Document requirements, including minor variations and limitations. All submittals shall include Contractor's certification that information complies with Contract Document requirements.
  - 3. Submittals received without the Contractor's review and approval markings shall be returned without comment and must be properly reviewed, marked and resubmitted.

**3.02 ECOLOGY'S MARK OF ACTIONS FOR SUBMITTALS**

- A. Except submittals for information, record, or similar purposes, where action and return is required or requested, Ecology shall review each submittal, mark to indicate action taken, and return promptly.
  - 1. Compliance with specified characteristics described herein is the Contractor's responsibility.
- B. Ecology shall mark each submittal with a uniform, self-explanatory notation describing, as follows, the action indicated for that submittal.
  - 1. Where submittals are marked "Approved," that part of the Work covered by the submittal may proceed, provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
  - 2. Where submittals are marked "Approved as Noted" that part of the Work covered by the submittal may proceed, provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
  - 3. When submittal is marked "Not Approved, Revise and Resubmit", the Contractor shall not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery or other activity. Revise or prepare a new submittal in accordance with the notations;

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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resubmit without delay. Repeat if necessary to obtain a different mark of action.

- a. Do not permit submittals marked “Not Approved, Revise and Resubmit” to be used at the Project site, or elsewhere where Work is in progress.
4. Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal shall be returned, marked “Action Not Required.”

**3.03 SUBMITTAL SCHEDULE**

- A. Check each Specification Section for the complete submittal requirements.
- B. The Submittal Schedule identifies in broad terms the general nature of the submittals that are required from the Contractor.
  1. The information contained in this Submittals Schedule is provided for the convenience of the Contractor.
  2. This list may not be complete
  3. This list does not include submittals required in **Division 00**.
- C. References to “prior to use”, or similar, in the Latest Allowable Submittal Date is the requirement for the Contractor to have received a submittal approval from Ecology.

<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
01 10 00	Project Summary	Permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records	Ongoing, as specified
01 20 00	Price and Payment Procedures	Schedule of Values review and Monthly Pay Estimate, Pencil Copy	3 days prior to Formal Pay Estimate
		Monthly Pay Estimate, Formal Copy	Monthly
01 31 00		Preliminary Project Schedule	2 weeks prior to mobilization

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
	Project Management and Coordination	Progress Schedule	Every week
01 33 00	Submittal Procedures	Contractor's Schedule of Submittals	2 weeks prior to start of excavation
01 35 29	Health, Safety, and Emergency Requirements	Health and Safety Plan	2 weeks prior to mobilization
01 35 43.10	Green Construction Practices	Green Cleanup Project Work Plan	Prior to mobilization
01 45 00	Contractor Quality Control	Quality Control Plan	Prior to mobilization
01 57 13	Temporary Erosion and Sedimentation Control	SWPPP	2 weeks prior to mobilization
		NPDES Transfer of Coverage Form	2 weeks prior to mobilization
		Monthly Discharge Reports	Monthly to WebDMR
01 66 00	Product Selection and Handling Requirements	Products Schedule	With the Preliminary Progress Schedule
01 74 00	Cleaning and Waste Management	Material Safety Data Sheets	Prior to use
01 77 00	Closeout Procedures	Draft Project Record	At Substantial Completion Inspection
		Final Project Record	Prior to Final Completion
02 21 13	Surveys	Survey Schedule	Included with the Preliminary Project Schedule, no later than 7 days prior to survey activities
		Pre-Construction Surveys	2 days prior to excavation
		Post-Excavation Surveys	Prior to beginning backfill activities

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
		Post-Construction Surveys	With Project Record for Substantial Completion
02 22 43	Existing Conditions Assessments	Existing Conditions Assessment Schedule	Included with the Preliminary Project Schedule
		Surface and Landscape Restoration Quality Control Plan	2 weeks prior to start of excavation and prior to Existing Conditions Assessments
		Existing Conditions Assessments	Prior to excavation
02 41 13	Selective Site Demolition	Schedule of Selective Demolition Activity	If/when requested by Ecology
02 61 13	Excavation and Handling of Contaminated Soil	Disposal Facility Information	Prior to excavation
03 30 00	Cast-In-Place Concrete	Product Data	Prior to use
		Test Reports	Prior to use
		Material Certifications	Prior to use
31 23 23	Fill	Material Samples	Prior to use
		Test Reports	Prior to use
		Sod supplier certification	Prior to use
		WSDOT pit certification	Prior to use
		Certified waybills and delivery tickets	Weekly
32 14 00	Unit Paving	Product Data	Prior to use
		Material Samples	Prior to use
		Test reports	Prior to use
		Certificates	Prior to use
32 15 00	Aggregate Surfacing	Material Samples	Prior to use
		Test reports	Prior to use
		Certificates	Prior to use
32 31 00	Fences	Product Data	Prior to use
32 32 23	Segmental Block Retaining Walls	Manufacturer's Certification	Prior to use
		Product Data	Prior to use

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 33 00 – SUBMITTAL PROCEDURES**

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<b>Project Manual Section</b>	<b>Section Title</b>	<b>Submittal</b>	<b>Submittal Date</b>
		Construction Shop Drawings	Prior to use
32 32 63	Rock-Armored Slopes	Material Samples	Prior to use
		Test reports	Prior to use
		Certificates	Prior to use
32 92 13	Hydroseeding	Seed Mix and Product Order	2 weeks prior to start of excavation
		Fertilizer Product Data	Prior to Use
		Maintenance Schedule	Prior to Maintenance and Finishing Period
		Maintenance Log	Monthly during Maintenance and Finishing Period
32 92 23	Sodding	Product Data and Order	2 weeks prior to start of excavation
		Fertilizer Product Data	Prior to Use
		Maintenance Log	Monthly during Maintenance and Finishing Period
32 93 33	Shrubs and Trees	Plant Availability Statement	After completion of Existing Conditions Assessment and prior to excavation
		Product Data	Prior to use
		Maintenance Log	Monthly during Maintenance and Finishing Period

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 29 – HEALTH, SAFETY, AND EMERGENCY RESPONSE**  
**PROCEDURES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work, Property Owners and Tenants in the vicinity of the Work area, and other persons who may be affected by the Work; prevent damage to property, pets, materials, supplies, and equipment, whether onsite or stored offsite; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property, or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- C. Contractor shall fulfill the health and safety requirements specified in **SECTION 02 61 13 – EXCAVATION AND HANDLING OF CONTAMINATED SOIL.**
- D. Nothing provided in this Section shall be construed as imposing any duty upon Ecology, A/E, Property Owner(s) and/or Tenant(s) with regard to, or as constituting any express or implied assumption of control or responsibility over, Project Site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

**1.02 SUBMITTALS**

- A. The Contractor shall submit a Project and Work Site-specific health and safety plan to Ecology at least two (2) weeks prior to the start of mobilization.
  - 1. This health and safety plan must be followed by the Contractor and a minimum of one (1) copy shall be available and accessible at the Project Site at all times.
  - 2. Where Work is being performed in different areas of the overall Project Site, multiple copies of the health and safety plan shall be available and accessible to Contractor personnel in each of those areas.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 29 – HEALTH, SAFETY, AND EMERGENCY RESPONSE**  
**PROCEDURES**

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3. Site-specific health and safety plan shall address the close proximity of Property Owners and/or Tenants to Work activities and how the Contractor shall maintain safety under those conditions.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 PERSONNEL DISCLOSURE AND TRAINING**

- A. Contractor shall provide all persons working on the Project Site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
  1. Information: At a minimum, Contractor shall inform persons working on the Project Site of:
    - a. The requirements of Chapter 296-62 WAC, General Occupational Health Standards.
    - b. The requirements of Chapter 296-848 WAC, Arsenic.
    - c. Any operations in their work area where hazardous chemicals are present.
    - d. The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and Material Safety Data Sheets (MSDS) required by Chapter 296-62 WAC.
  2. Training: At a minimum, Contractor shall provide training for persons working on the Project Site, which includes:
    - a. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.).
    - b. The physical and health hazards of the chemicals in the work area.
    - c. The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project Site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used.

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3. The details of the hazard communication program developed by Contractor or its Subcontractors, including an explanation of the labeling system and the MSDS, and how employees can obtain and use the appropriate hazard information.

**3.02 EXPOSURE AND SAFETY MANAGEMENT**

- A. Contractor shall notify Ecology in writing a minimum of twenty-one (21) calendar days in advance if there is a risk of exposure of Property Owners, Tenants, pets/animals, or the public to hazardous chemicals used during Work. This written notification shall include all the information specified in this Paragraph and a discussion of the potential risks and control methods to be used by the Contractor to minimize the exposure of non-construction personnel and the public in close proximity to the Work.
- B. Contractor shall provide all assistance and guidance promptly to Ecology, Property Owner, and Tenant(s) necessary to achieving and maintaining a safe work site.
- C. Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
  1. Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project Site any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state, or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored more than 90 days on the Project Site.
  2. Contractor shall promptly notify Ecology of all spills or releases of any hazardous substances that are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Ecology of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project Site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project Site.
- D. All Work shall be performed with due regard for the safety of the Property Owners, Tenants, animals/pets on the property, and the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians.

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1. All arrangements to care for such traffic shall be Contractor's responsibilities.
  2. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- E. Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Ecology. Ecology shall, at all times, have a right of access to all records of exposure.
- F. The Contractor shall furnish, erect, and maintain such fences, barriers, lights, and signs and provide such flagging and guards as are necessary in the opinion of Ecology to give adequate warning to the public of the construction and of any dangerous condition which may be encountered as a result thereof.
- G. The Contractor shall meet all safety requirements of *WAC 296-155-650 Part N, EXCAVATION, TRENCHING, AND SHORING* when excavating over four feet in depth.

**3.03 EMERGENCIES**

- A. In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
- B. Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, Property Owner(s), Tenant(s), pets owned by Property Owner(s) and/or Tenant(s), materials, supplies, or equipment. Contractor shall immediately report any such incident to Ecology. Ecology shall, at all times, have a right of access to all records of exposure.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

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**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Cleaning up contaminated sites involves the use of energy, water, and other natural resources. Site cleanup activities can create an environmental footprint beyond the site itself. Because the environmental footprint of a remediation activity may exceed the site physical boundary, Green Remediation best management practices can be used to minimize the footprint and maximize environmental outcomes.
- B. Ecology desires to minimize its environmental impact in all phases of cleanup actions, including construction, and refers to this as Green Remediation. To meet this intent, to the extent practicable, the contractor shall explore and implement green remediation strategies and applications in the performance of the requirements of this project to maximize use of sustainable construction practices, reduce energy and water usage, promote demolition and construction materials reuse and recycling and use of recycled content materials, and minimizing impacts from site cleanup activities through controls on construction activities to preserve and protect our land, air, and water resources.
- C. These guiding principles are the foundation for developing and implementing green construction practices:
  - 1. Minimize total energy use and increase the percentage of energy use from renewable resources.
  - 2. Minimize air pollution and greenhouse gas emissions.
  - 3. Reduce water use and negative impacts on water resources.
  - 4. Improve materials management and reduce, reuse and recycle material and waste.
  - 5. Protect ecosystems during site cleanup.
  - 6. Consider climate change.

**1.02 SUBMITTALS**

- A. Prior to mobilization the contractor shall submit a Green Cleanup Project Work Plan to Ecology.

**1.03 RELATED SECTIONS**

- A. Section 01 25 00 – Substitution Procedures
- B. Section 01 33 00 – Submittal Procedures
- C. Section 01 57 13 – Temporary Erosion and Sediment Control

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

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- D. Section 01 66 00 – Product Selection and Handling Requirements
- E. Section 01 74 00 – Cleaning and Waste Management
- F. Divisions 2 -32: See Part 2 – Products for Material Requirements in each Section

**1.04 REFERENCES**

- A. ASTM E2893-16(E1) Standard Guide for Greener Cleanups

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 GREEN CLEANUP PROJECT WORK PLAN**

- A. Prior to mobilization the contractor shall submit a Green Cleanup Project Work Plan that shall identify and describe each green remediation practice it proposes to use and how it will be implemented, to include those practices that are required by the contract documents and those that are independently proposed by the Contractor. This Plan will include, at a minimum, practices that:
  - 1. Incorporate equipment emission reduction controls and describe procedures for equipment operations that identify measures to operate equipment to minimize emissions including engine idling reduction procedures, use of biodiesel and/or ultra low sulfur fuels only, and use clean technology equipment designed to reduce exhaust emissions.
  - 2. Minimize transportation requirements on the project by use of the least impacting transportation methods practical, combining trips, use of backhaul.
  - 3. Maximize use of products containing recycled materials (i.e. compost materials, concrete, backfill material, erosion control materials) that satisfy the specified performance requirements for project materials, and procedures for material recycling, reuse, and waste minimization.
  - 4. Use material suppliers that are in close proximity of the project work sites.
  - 5. Use, to the maximum extent possible, the Green and Sustainable Site Cleanup Best Management Practices from the list provided herein, and describes how they will be implemented.
- B. The Plan shall include a format for reporting/documenting best practices used on the project as part of contractor's weekly project progress updates that includes the following measures:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

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1. Equipment inventory and emission reduction controls on each piece of equipment
2. Equipment use based on hour meters.
3. Total quantity of fuel in gallons used each week and type of fuel used
4. Disposal of construction wastes as identified in Part 3, paragraph 3.04. The Contractor shall include a section on materials reuse, recycling, waste stream reduction, and resource conservation measures employed as part of the weekly project progress reports. This section will document what measures are in place to keep uncontaminated wastes out of landfills or disposal facilities. These actions are intended to conserve energy or other natural resources, thereby reducing negative impacts of a cleanup action.

**3.02 PROTECTION OF LAND, AIR, AND WATER RESOURCES**

- A. Contractor shall consider and incorporate both temporary and permanent site controls to minimize impacts from site clearing, excavation, backfill, and grading operations that should include:
1. Minimizing noise created over ambient noise levels.
  2. Use of dust control measures.
  3. Retaining construction water runoff and developing a method for reuse of water on site or use of recycled water for equipment wash down and dust control.
  4. Disposal of construction debris at recycling centers.
  5. Following erosion and sediment control practices including silt curtains and other similar barriers to prevent silt laden runoff from stormwater or other sources from leaving the project site without treatment.
  6. Maintaining a responsive oil spills cleanup capability including materials on site.
  7. No burning of any kind on the project site.
  8. Use of native landscape materials, plastic sheeting, and recycled wood waste mulches to stabilize construction sites and minimize erosion.

**3.03 EQUIPMENT EMISSIONS CONTROLS**

- A. The Contractor shall include the following actions, as applicable, to reduce equipment exhaust emissions from the project site and which shall be included in its Plan, to include:

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

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1. Alternative Fuel Use and Clean Technologies: The Contractor is encouraged to use clean technologies and/or fuels on all diesel equipment to the extent practicable and/or feasible. The preference is for clean diesel technologies, but alternative fuels, such as biodiesel, low sulfur diesel fuel, or natural gas-powered vehicles are acceptable options. These alternative fuels will be used where they are available within a reasonable distance to the sites. For equipment retrofits, the Contractor shall employ the Best Available Control Technology on non-road and on-road diesel powered equipment used at a site. Examples of clean diesel technologies include diesel particulate filters (DPFs), and diesel oxidation catalysis (DOCs). For alternative fuel usage, the Contractor shall use commercial available biodiesel blends, with the goal to use at least a B20 blend (i.e., 20% biodiesel and 80% petro diesel) or ultra low sulfur diesel fuels, in the equipment engines that are used at the site.
2. No-Idle Practices: In addition to using alternative fuel, the Contractor shall use methods to control nuisance odors associated with diesel emissions from construction equipment including the following:
  - a. Turning off diesel combustion engines on construction equipment not in active use, and on trucks that are idling while waiting to load or unload material for five minutes or more; and
  - b. Locating diesel equipment away from the general public and sensitive receptors.
  - c. Idling of diesel powered vehicles and equipment must not be permitted during periods of non-active vehicle use. Diesel powered engines shall not be allowed to idle for more than five consecutive minutes in a 60-minute period when the equipment is: not in use, occupied by an operator, or otherwise in motion, except as follows:
    - When equipment is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control,
    - When it is necessary to operate auxiliary systems installed on the equipment, only when such system operation is necessary to accomplish the intended use of the equipment,
    - To bring the equipment to the manufacturers recommended operating temperature,
    - When the ambient temperature is below forty (40) degrees F or above eighty (80) degrees F, or
    - When equipment is being repaired.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

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3. Clean Air Technologies: In performance of all activities under this contract, the Contractor shall, where feasible, use cleaner engines, cleaner fuel and cleaner diesel control technology on diesel powered equipment with engines greater than 50 horsepower whether the equipment is owned or rented. Cleaner engines include non-road engines meeting Tier 1 or cleaner standards and on-road engines meeting 2004 On highway heavy Duty Engine Emission Standards or cleaner, whether the equipment is owned or rented. Cleaner fuels include biodiesel blends or ultra low sulfur diesel. Cleaner diesel control technology includes EPA or California Air Resources Board (“CARB”) verified diesel particulate filters (“DPFs”) or diesel oxidation catalysts (“DOCs”).
4. Engine Maintenance: Contractors perform routine and scheduled engine inspections and conduct preventative maintenance, giving any problems identified immediate attention. Perform routine engine cleaning and use environmentally friendly lubricants (i.e. bio-based) where available and where specified as an approved lubricant by engine and equipment manufacturers.
5. Transportation Alternatives: The Contractor shall transport material to and from the site by truck, rail, barge, or other method or a combination of methods as site requirements may dictate, and when feasible, to an Ecology approved facility in accordance with local, state, and federal regulations.

**3.04 CONSTRUCTION MATERIALS HANDLING AND DISPOSAL**

- A. Disposal of Construction Demolition Debris and Unsuitable Materials: To the greatest extent possible, the Contractor shall minimize the amount of waste disposal in landfills by seeking opportunities to reduce, reuse or recycle demolition materials that are not contaminated by hazardous substances. The Contractor shall dispose of uncontaminated, recyclable, or salvable demolition materials by a combination of salvage, reuse, or recycling at a facility approved by Ecology. The Contractor shall submit receipts, scale tickets, and/or waybills to Ecology documenting disposal and/or recycling. Recyclable materials may include building materials such as lumber and other wood products, metal, concrete, rebar, pipe materials, and asphalt, but shall not include materials impacted by contaminated soils.

**3.05 GREEN REMEDIATION AND SUSTAINABLE BEST MANAGEMENT PRACTICES**

- A. Table 1 identifies the Best Management Practices that the Contractor shall incorporate, where practical, into the project requirements.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

**TABLE 1: Green Remediation and Sustainable Best Management Practices**

Action	Potentially Applicable to Site?	Potential Benefits			
		Air	Energy	Water	Land
Use alternate fuels such as biodiesel and E85.		Reduces air emissions from on-site construction equipment and from trucking waste materials.	Reduces use of petroleum products in on-site construction equipment and in trucking waste materials.		Less toxic to the environment should a leak occur.
Require vehicles and construction equipment to use idle reduction technologies		Reduces direct and indirect green-house gas and other emissions, e.g., CO, CO <sub>2</sub> , VOCs, NO <sub>x</sub> , SO <sub>x</sub> .	Reduces fuel use in on-site construction equipment and vehicles.		Reduces noise impacts.
Sequence work to minimize double-handling of materials.		Reduces air emissions from on-site construction equipment. Reduces nuisance dust.	Reduces fuel use in on-site construction equipment.	Reduces water quality impacts from erosion	Restores land sooner.
Use on-site renewable energy to power elements of the remedy, e.g., wind and solar power for treatment system.			Reduces purchased energy.		May be an asset to redevelopment if left on site after cleanup.
Purchase green energy to power elements of the remedy		Reduces air impacts of cleanup.			
Use permeable surface soil barriers, e.g., vegetated top soil or gravel				Reduces stormwater runoff	Increases post cleanup marketability of developable sites.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

Action	Potentially Applicable to Site?	Potential Benefits			
		Air	Energy	Water	Land
Reclaim grey water for reuse.				Reduces water use.	
Use engineered surface soil barriers, e.g., pavement, cover system.		Reduces air emissions from on-site construction equipment and from trucking.	Reduces fuel use in on-site construction equipment and in trucking waste materials.		Reduces waste material requiring off-site disposal.
Use in-situ remediation technologies (e.g. monitored natural attenuation; chemical oxidation).		May reduce air emissions by reducing excavation and materials handling.	Reduces fuel use in on-site construction equipment and in trucking waste materials.		Less intrusive, especially if structures present like roads, utilities and valuable buildings.
Use cleanup technologies that permanently destroy contaminants (incineration, treatment).			May be more energy intensive.		Reduces future contaminant migration concerns; eliminates need for long term maintenance and monitoring.
Use treated soils to backfill excavation.		Reduces emissions from trucking in clean fill.			Reduces clean fill material requirements.
Retain existing structures on site.		Reduces air emissions from demolition activities.	Reduces fuel used for demolition and in trucking wastes offsite.		Preserves structures for future redevelopment; provides link to the past.
Recycle waste materials generated during cleanup					Reduces material requiring off-site disposal
Collect rain water for on-site use e.g. dust control.				Reduces water use; stormwater impacts.	
Install temporary dewatering systems to				Reduces potential ground and	Better control of limits of excavation.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 35 43.10 – GREEN CONSTRUCTION PRACTICES**

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<b>Action</b>	<b>Potentially Applicable to Site?</b>	<b>Potential Benefits</b>			
		<b>Air</b>	<b>Energy</b>	<b>Water</b>	<b>Land</b>
lower groundwater.				surface water impacts.	

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 00 – REGULATORY REQUIREMENTS**

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**PART 1 - GENERAL**

**1.01 AUTHORITY OF CODES, ORDINANCES AND STANDARDS**

- A. All codes, ordinances and standards referenced in the Project Manual shall have the full force and effect as though printed in the entirety in the Project Manual.

**1.02 PRECEDENCE OF CODES, ORDINANCES AND STANDARDS**

- A. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
- B. Where the Project Manual require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Project Manual shall take precedence so long as such increase is legal.
- C. Where no requirements are identified in the Project Manual, comply with all requirements of applicable codes, ordinances and standards of authorities having jurisdiction.

**1.03 APPLICABLE CODES, LAWS AND ORDINANCES**

- A. Performance of the Work shall be governed by all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
- B. Performance of the Work shall meet or exceed the minimum requirements of the series of Codes published by the International Code Council (ICC) and the National Electrical Code (NEC), as adopted and interpreted by local authorities having jurisdiction.
- C. Performance of the Work shall be accomplished in conformance with all rules and regulations of public utilities, utility districts and other agencies serving the facility.
- D. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Contract Documents.

**1.04 DATE OF CODES, LAWS AND ORDINANCES**

- A. The applicable edition of all codes shall be that adopted at the time of issuance of permits by authorities having jurisdiction or the execution of the Contract Documents, whichever is applicable, and shall include all

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 41 00 – REGULATORY REQUIREMENTS**

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modifications and additions adopted by that jurisdiction and Ecology. The applicable date of laws and ordinances shall be that of the date of performance of the Work.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 42 00 – REFERENCES**

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**PART 1 - GENERAL**

**1.01 USE OF REFERENCES**

- A. The Project Manual contains references to various standards, standard specifications, codes, practices and requirements for products, execution, tests and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual Sections.
1. Wherever term “Agency” occurs in Standard Specifications, it shall be understood to mean the term used for Ecology for purposes of the Contract.
  2. Wherever term “Engineer” occurs in Standard Specifications, it shall be understood to mean A/E for purposes of the Contract, unless otherwise specified by Ecology.
  3. Standard Specifications shall be as amended and adopted by the jurisdiction in which the Project is located.
  4. Where reference is made to Standard Details, such reference shall be to the Standard Details accompanying the Standard Specifications, as amended and adopted by the jurisdiction in which the Project is located.
- B. Specifications and Standards of ASTM International (ASTM) and the American National Standards Institute (ANSI) are identified in the Project Manual by abbreviation and number only and may not be further identified by title, date, revision or amendment.
- C. Reference standards are not furnished with the Project Manual because it is presumed that Contractor, Subcontractors, manufacturers, suppliers, trades and crafts are familiar with these generally recognized standards of the construction industry.
1. Copies of references standards may be obtained from publishing sources.
- D. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the permit issued by authorities having jurisdiction or the execution of the Contract Documents, whichever is applicable.
1. All amendments, changes, errata and supplements as of the effective date shall be included.
- E. Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 42 00 – REFERENCES**

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Refer uncertainties and requirements that are different, but apparently equal, to Ecology for a decision before proceeding.

1. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to Ecology for a decision before proceeding.
- F. Contractor shall obtain and maintain at the Project Site copies of referenced codes and standards identified in the Project Manual in order to properly execute the Work.

**1.02 DEFINITIONS OF TERMS**

- A. Additional words and terms may be used in the Project Manual and are defined as follows:
1. And/or: If used, shall mean that either or both of the items so joined are required.
  2. Applicable: As appropriate for the particular condition, circumstance or situation.
  3. Approve(d): Approval action shall be limited to the duties and responsibilities of the party giving approval, as stated in the Contract Documents. Approvals shall be valid only if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval shall not relieve the Contractor from responsibility to fulfill the Contract.
  4. Directed: Limited to duties and responsibilities of Ecology or A/E as stated in the Contract Documents, meaning as instructed by Ecology or A/E, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as directed, requested, authorized, selected, approved, required and permitted mean directed by Ecology, directed by the A/E, requested by Ecology, and similar phrases. No implied meaning shall be interpreted to extend the responsibility of Ecology, A/E or other responsible design professional into the Contractor's supervision of construction.
  5. Equal or equivalent: As determined by Ecology, A/E or other responsible design professional as being equivalent, considering such attributes as durability, finish, function, suitability, quality, utility, performance and aesthetic features.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 42 00 – REFERENCES**

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6. Furnish: Means supply and deliver, to the Project Site, ready for unloading, unpacking, assembly, installation and similar operation.
7. Indicated: The term indicated refers to graphic representations, notes, schedules or Paragraphs in the Project Manual, and similar requirements in the Contract Documents.
8. Install: Describes operations at the Project Site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.
9. Installer: Refers to the Contractor or an entity engaged by the Contractor, such as an employee, Subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operation. Installers are required to be experienced in the operations they are engaged to perform.
  - a. Experienced Installer: The term experienced, when used with installer, means having a minimum of 5 previous Projects similar in size to this Project, knowing the precautions necessary to perform the Work, and being familiar with requirements of authorities having jurisdiction over the Work.
10. Jobsite: Same as Site.
11. Necessary: With due considerations of the conditions of the Project and as determined in the professional judgment of the responsible design professional as being necessary for performance of the Work in conformance with the requirements of the Contract Documents, but excluding matters regarding the means, methods, techniques, sequences and procedures of construction.
12. Noted: Same as Indicated.
13. Per: Same as “in accordance with”, “according to” or “in compliance with”.
14. Product: Material, system or equipment.
15. Project Site: Same as Site, Project Area, and Work Area.
16. Proper: As determined by Ecology, A/E or other responsible design professional as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the Contractor’s responsibility to determine.
17. Provide: Means furnish and install, complete and ready for the intended use.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 42 00 – REFERENCES**

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18. Regulation: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work.
19. Required: Necessary for the performance of the Work in conformance with the requirements of the Contract Documents, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, such as:
  - a. Regulatory requirements of authorities having jurisdiction.
  - b. Requirements of referenced standards.
  - c. Requirements generally recognized as accepted construction practices of the locale.
  - d. Notes, schedules and graphic representations in the Project Manual
  - e. Requirements specified or referenced in the Project Manual
  - f. Duties and responsibilities stated in the Contract Documents
20. Scheduled: Same as Indicated.
21. Selected: As selected by Ecology, A/E or other responsible design professional from the full selection of the manufacturer's products, unless specifically limited in the Contract Documents to a particular quality, color, texture, or price range.
22. Shown: Same as Indicated.
23. Site: Same as "Site of the Work", Jobsite, Work Area, Project Area, or Project Site; the areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the Project. The extent of the Project Site is shown in the Project Manual and may or may not be identical with the description of the land upon which the Project is to be completed.
24. Supply: See Furnish.
25. Testing and Inspection Agency: An independent entity engaged to perform specific inspection or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or test.
26. Testing Laboratory: Same as Testing and Inspection Agency.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 42 00 – REFERENCES**

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**1.03 ABBREVIATIONS, ACRONYMS, NAMES AND TERMS**

- A. Where acronyms, abbreviations, names and terms are used in the Project Manual or other Contract Documents, they shall mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other applicable entity.
- B. The following are commonly used abbreviations which may be found in the Project Manual and/or the applicable standard specifications to the Project:

AC or ac context)	alternating current or air conditioning (depending upon
amp	ampere
C	Celsius
CFM or cfm	cubic feet per minute
CM or cm	centimeter
CY or cy	cubic yard
DC or dc	direct current
DEG or deg	degrees
F	Fahrenheit
FPM or fpm	feet per minute
FPS or fps	feet per second
FT or ft	foot or feet
Gal or gal	gallons
GPM or gpm	gallons per minute
IN or in	inch or inches
Kip or kip	thousand pounds
KSF or ksf	thousand pounds per square foot
KSI or ksi	thousand pounds per square inch
KV or kv	kilovolt
KVA or kva	kilovolt amperes
KW or kw	kilowatt
KWH or kwh	kilowatt hour
LBF or lbf	pounds force
LF or lf	lineal foot
M or m	meter
MM or mm	millimeter
MPH or mph	miles per hour
PCF or pcf	pounds per cubic foot
PPM or ppm	parts per million (typically mg/kg for solid waste)
PSF or psf	pounds per square foot
PSI or psi	pounds per square inch
SF or sf	square foot or feet
SY or sy	square yard
V or v	volts

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 42 00 – REFERENCES**

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**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 45 00 – CONTRACTOR QUALITY CONTROL**

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**PART 1- GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. This section describes the Contractor's general quality control requirements, duties, and responsibilities during execution of the Contract Work. Detailed quality control requirements are presented in individual specification sections.
- B. The Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction conform to requirements of the Contract Documents and Manufacturer recommendations. Although the guidelines are established and certain minimum requirements are specified herein and elsewhere in the Contract Documents, the Contractor shall assume full responsibility for accomplishing the stated purpose.
- C. The Contractor shall be prepared to discuss and present, at the Preconstruction Meeting, its understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Plan has been reviewed and approved by Ecology or Ecology's Representative.

**1.02 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturer's instructions, including each step in the sequence.
- C. Should manufacturer's instructions conflict with contract Documents, request clarification from Ecology or Ecology's Representative before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce required and specified quality.

**1.03 REFERENCES AND STANDARDS**

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with the requirements of the standard, except where more rigid requirements are specified by applicable codes.

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**SECTION 01 45 00 – CONTRACTOR QUALITY CONTROL**

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- B. Conform to reference standard by date of issue current on date of contract documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.

**1.04 TESTING SERVICES**

- A. Necessary materials testing shall be performed by an independent testing laboratory during the execution of the Work. Access to the area necessary to perform the testing and/or to secure the material for testing shall be provided by the Contractor.
- B. Testing does not relieve the Contractor from performing work to contract requirements.
- C. Retesting required because of non-performance to specified requirements shall be performed by the same independent firm. Payment for retesting will be charged to the Contractor by deducting testing charges from the contract sum.
- D. Subsequent sampling and testing, required as the work progresses to assure continued control of materials and compliance with all requirements of Contract documents, shall be the responsibility of Ecology, except as required by other sections of these specifications.

**1.05 SUBMITTALS**

- A. The Contractor shall provide the Quality Control Plan to Ecology or Ecology's Representative prior to mobilization in accordance with **Section 01 33 00 – Submittal Procedures**.

**PART 2 - PRODUCTS**

**2.01 CONTRACTORS DAILY REPORT REQUIREMENTS**

- A. Date the report is issued.
- B. Project name and Ecology contract number.
- C. Work performed each day.
- D. Name of workers and subcontractors performing work each day including hours worked by each person.
- E. Type of equipment and hours used each day.
- F. Surveys completed.
- G. Submittals made.
- H. Samples collected

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- I. Tests completed and results, or schedule for receiving results.
- J. Test results received.
- K. Weather conditions, summary of stormwater management, monitoring completed and results, BMPs modified, stormwater released, and contingencies implemented.
- L. Identification of bid item quantities used each day, or percent complete for lump sum items.
- M. Identification of potential items that may result in schedule overruns or added costs.

**PART 3 – EXECUTION**

**3.01 CONTRACTOR QUALITY CONTROL**

- A. Documentation
  - 1. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, proposed corrective action; and corrective actions taken.
- B. Non-compliance
  - 1. Ecology or Ecology's Representative may notify the Contractor of any non-compliance with project quality control requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Failure to take corrective action shall be grounds for Ecology to withhold payment for those items not performed based on the costs for the items as listed in the Schedule of Values.
- C. In cases where quality control activities do not comply with either the Contractor's Quality Control Plan or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by Ecology or Ecology's Representative, Ecology or Ecology's Representative may:
  - 1. Direct the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.
  - 2. Carry out the functions and operations of the Contractor's Quality Control Plan. Costs incurred by Ecology to operate the Quality Control Program plan or to otherwise remedy the Contractor's non-compliance with quality-related provisions of the Contract shall be deducted from the total amount due the Contractor.

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3. Order the Contractor to stop operations until appropriate corrective actions are taken.
- C. Any failure by Ecology to notify the Contractor of any non-compliance with any of the foregoing requirements shall not be deemed as a waiver of its enforcement rights hereunder and that the Contractor is still bound by the terms and conditions of said requirement.

**3.02 CONTRACTORS DAILY REPORT**

- A. Contractor shall provide Ecology with a written daily report at the end of each day's work. The Contractors Daily Report shall describe the work accomplished that day and address each item listed in Article 2.01 of this Section. The Contractor's Daily Reports will be one of the agenda items discussed at the weekly project meeting described in **Section 01 31 00 – Project Management and Coordination**.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 51 00 – TEMPORARY UTILITIES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Temporary construction utilities and support facilities required for the Work include, but are not limited to, the following:
1. Water service and distribution (including irrigation).
  2. Temporary electric power and light.
  3. Combined sewer (storm).
  4. Sanitary services, including drinking water.
- B. Contractor shall comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
1. Building Code requirements, including local requirements, standards and regulations where more restrictive.
  2. Health and safety regulations.
  3. Utility company regulations.
  4. Police, Fire Department and Rescue Squad rules.
  5. Environmental protection regulations.
- C. Due to the present occupancy of Parcels comprising the Project Site by Property Owners and/or Tenant(s) who are not Ecology, it is not possible for Ecology to furnish utility access to the Contractor. Utilities provided to each property in Project Site are further private in nature and subject to Property Owner contracts and billing that Ecology has no access to or authority over.
1. Contractor **shall not** connect to any on-site utility service provided to Property Owner and/or Tenant(s) unless Ecology approves in writing in advance.
  2. Contractor shall anticipate furnishing all temporary utility needs to complete the Work. This shall include, but not be limited to, electricity and water for dust control and irrigation.
- D. Contractor shall provide adequate utility capacity at and for each stage of the Work. Due to the limits of existing utility availability, Contractor shall provide trucked-in utility services where local service is not available or is unfeasible.
- E. Contractor shall arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Contractor shall obtain required certifications and permits.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 51 00 – TEMPORARY UTILITIES**

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- F. Contractor shall keep temporary services and facilities clean and neat in appearance.
  - 1. Operate in a safe and efficient manner.
  - 2. Take necessary fire prevention measures.
  - 3. Do not overload facilities, or permit them to interfere with progress.
  - 4. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the Project Site.

**PART 2 - PRODUCTS**

**2.01 GENERAL MATERIALS AND EQUIPMENT**

- A. Provide new materials to be used or, if acceptable to Ecology, undamaged previously-used materials in serviceable condition. Provide materials suitable for the use intended.
- B. The Contractor shall provide equipment in good working order, and maintain the good working condition of all equipment during Work.

**2.01 TEMPORARY ELECTRICAL**

- A. The Contractor shall provide grounded electrical extension cords and use “hard-service” cords where exposed to abrasion and traffic. Waterproof connectors shall be provided by Contractor to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.
- B. The Contractor shall provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

**2.03 TEMPORARY SEWER/STORMWATER/DRAINAGE DISPOSAL**

- A. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off the site in a lawful manner.

**2.04 TEMPORARY WATER**

- A. Contractor shall provide potable water approved by local health authorities, in sufficient quantity to perform the Work and comply with state regulations and requirements.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 51 00 – TEMPORARY UTILITIES**

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**PART 3 - EXECUTION**

**3.01 GENERAL INSTALLATION**

- A. Contractor shall use qualified personnel for installation of temporary utilities, and shall relocate and modify facilities during the course of construction as required.
- B. The Contractor may engage the appropriate local utility company to install temporary service or connect to existing service, provided such installation or connection does not interfere with utility service or add cost to the Property Owner and/or Tenant(s).
  - 1. Where the appropriate utility company provides only part of the service, the Contractor shall provide the remainder with matching, compatible materials and equipment and comply with the appropriate utility company's requirements and recommendations.
  - 2. Ecology may approve, at Ecology's sole discretion, an arrangement between Contractor, the specific utility company and the on-site Property Owner and/or Tenant(s) to interrupt utility service and make connections for temporary construction utilities.
  - 3. Contractor is responsible for obtaining easements to bring temporary utilities to Project Site areas, with no addition acceptable to either Contract Sum or Contract Time.
  - 4. Usage of utilities for temporary construction facilities are not chargeable to Ecology and will not be accepted as the basis of an increase to either Contract Sum or Contract Time.
- C. Contractor shall provide each temporary utility ready for use when needed to avoid delay to the Work, and shall maintain and modify each facility as required.
  - 1. Do not remove until facilities are no longer needed.

**3.02 TEMPORARY SEWER/STORMWATER/DRAINAGE DISPOSAL**

- A. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways before discharge.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 52 00 – CONSTRUCTION FACILITIES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Temporary construction support facilities required for the Work include, but are not limited to, the following:
  - 1. First aid facilities.
  - 2. Fire extinguishers.
  - 3. Temporary enclosures.
  - 4. Barricades, warning signs and lights.
  - 5. Sanitary services, including drinking water.
- B. Contractor shall comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
  - 1. Building Code requirements, including local requirements, standards and regulations where more restrictive.
  - 2. Health and safety regulations.
  - 3. Utility company regulations.
  - 4. Police, Fire Department and Rescue Squad rules.
  - 5. Environmental protection regulations.
- C. Contractor shall keep temporary services and facilities clean and neat in appearance.
  - 1. Operate in a safe and efficient manner.
  - 2. Take necessary fire prevention measures.
  - 3. Do not overload facilities, or permit them to interfere with progress.
  - 4. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the Project Site.
- D. Contractor shall provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted; or that any other undesirable effects might result.
  - 1. Avoid use of tools and equipment which produce harmful noise.
  - 2. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or other entities located in or near the Project Site.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 52 00 – CONSTRUCTION FACILITIES**

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**PART 2 - PRODUCTS**

**2.01 MATERIALS AND EQUIPMENT**

- A. Provide new materials to be used or, if acceptable to Ecology, undamaged previously-used materials in serviceable condition. Provide materials suitable for the use intended.
- B. Contractor shall provide sufficient first aid supplies and equipment to comply with governing regulations and requirements.
- C. Contractor shall provide hand-carried, portable, UL22 rated, class “ABC” dry chemical extinguishers, or a combination of extinguishers of National Fire Protection Association (NFPA) recommended classes for the exposures.
  - 1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposures.
  - 2. Provide additional protection as may be required by the local Fire Marshal.
- D. For safety barriers, sidewalk bridges, and similar uses, Contractor shall provide UL labeled fire treated 2x4 studs and minimum 5/8” thick exterior plywood.
- E. For temporary enclosures and other uses, Contractor shall provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.

**PART 3 - EXECUTION**

**3.01 GENERAL INSTALLATION**

- A. Contractor shall use qualified personnel for installation of temporary facilities, and shall relocate and modify facilities during the course of construction as required.
- B. Contractor shall provide each facility ready for use when needed to avoid delay to the Work, and shall maintain and modify each facility as required.
  - 1. Do not remove until facilities are no longer needed.
  - 2. Remove prior to Substantial Completion or as agreed to by Ecology.
- C. Contractor shall locate staging areas, sanitary facilities and other temporary construction and support facilities for easy access.

**3.02 SANITARY AND OFFICE FACILITIES**

- A. Sanitary Facilities

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 52 00 – CONSTRUCTION FACILITIES**

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1. Contractor shall install and maintain self-container, single-occupant sanitary toilet facilities for the duration of the Project. Toilets shall be of the chemical type and shall be removed prior to Final Completion.
  2. Contractor shall provide and maintain a hand washing station for the duration of the Project.
  3. Contractor shall provide fresh drinking water for employees.
- B. Office Facilities
1. Contractor may install and maintain necessary field office space for the duration of the Project. Office space shall be removed prior to Final Completion.

**3.03 TEMPORARY ENCLOSURES**

- A. Contractor shall provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.
1. Install tarpaulins securely, with incombustible wood framing and other materials.
  2. Close openings of 25 square feet or less with plywood or similar materials.

**3.04 BARRICADES, WARNING SIGNS, AND LIGHTS**

- A. Contractor shall comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 56 26 – TEMPORARY FENCING**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Temporary fencing is to be provided as needed to sufficiently separate the construction activities from existing Property Owners and/or Tenants, children, pets, adjacent property owners and/or tenants and their families and pets, the public and public amenities.
- B. Temporary construction fencing required for the Work includes, but are not limited to, the following:
  - 1. Fencing of areas where Work is being performed.
  - 2. Fencing of laydown or other construction operational areas.
  - 3. Fencing for temporary dog runs on individual Parcels.
- C. Contractor shall comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
  - 1. Building Code requirements, including local requirements, standards and regulations where more restrictive.
  - 2. Health and safety regulations.

**PART 2 - PRODUCTS**

**2.01 MATERIALS AND EQUIPMENT**

- A. Provide new materials to be used or, if acceptable to Ecology, undamaged previously-used materials in serviceable condition. Provide materials suitable for the use intended.
- B. For open-mesh construction fencing, the Contractor shall provide 11-gage, galvanized 2-inch, chain link fabric fencing 6-feet high with galvanized steel pipe posts, 1-1/2 inch inner diameter for line posts and 2-1/2 inch inner diameter for corner posts.
- C. A sufficient number of clamps to secure all fence sections used by the Contractor at the Project Site.
- D. A sufficient number of movable fence bases to secure all fence sections used by the Contractor at the Project Site.
- E. Contractor shall only be permitted to use orange rubberized fencing during the last 15 days of the maintenance and finishing period of a Parcel and to fence small areas of corrective work.
  - 1. When used, Contractor shall provide sufficient upright stakes and ties to securely hold orange fencing vertical at its full height.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 56 26 – TEMPORARY FENCING**

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2. Contractor shall not attach orange fencing to any existing structure (e.g., gates, downspouts, columns, etc.)

**PART 3 - EXECUTION**

**3.01 INSTALLATION**

- A. Contractor shall use qualified personnel for installation of temporary fencing, and shall relocate and modify facilities during the course of construction as required.
- B. Contractor shall provide temporary fencing ready for use when needed to avoid delay to the Work, and shall maintain and modify fencing as required.
  1. Do not remove until fencing is no longer needed.
- C. Around each area where construction activity for the Work is being performed, the Contractor shall install open-mesh, chain link enclosure fences with posts properly secured and a lockable entrance gate or similar means of entry. The fence shall be of sufficient length to accommodate construction operations, and as required for work/staging area safety and security.
  1. Install in a manner that will prevent people, dogs and other animals from easily entering, except by the entrance gate when open.
  2. Where materials and equipment must be stored, and are of value or attractive for theft (including personal possessions of Property Owners and/or Tenants), the Contractor shall provide a secure lockup of the Work areas.
  3. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
  4. Contractor shall verify at the end of each day that all fence sections are secured and clamped to prevent collapse or unauthorized entry into Work areas.
  5. Contractor shall make effort to maintain the integrity of the fences when high winds are forecasted. Damage resulting from falling fences is the responsibility of the contractor
- D. Where Work is being performed on a property whose Property Owner and/or Tenant(s) own one or more dogs, the Contractor shall provide an enclosure using open-mesh, chain link fence properly posted and accessible from the property residence without entering the areas of Work.
  1. Dog run enclosures shall only be provided in areas where the removal of existing sod has not taken place or new sod has already been installed and such use will not damage the new sod.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 56 26 – TEMPORARY FENCING**

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2. The area encompassed for the purposes of a dog run shall be determined based on the existing site conditions for each Parcel and the size of the dog to be enclosed.
3. The location of this enclosure shall be adjusted as necessary to permit Work to be performed on each property without delay.
4. The Property Owner and/or Tenant(s) may voluntarily waive the creation of dog runs by Contractor.
  - a. Ecology's field representative will contact Property Owner(s) and/or Tenant(s), and communicate requests to Contractor.
5. If Contractor cannot implement a dog enclosure without imposing delay or restriction of the Work, Ecology shall be contacted promptly and so advised. Ecology will coordinate that finding with Property Owner(s) and/or Tenant(s).

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 56 39 – TEMPORARY TREE AND PLANT PROTECTION**

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**PART 1 – GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall bear the responsibility for preserving and protecting trees and plants identified by Ecology as needing to be preserved during Work.
  - 1. This shall include all trees and plants specified as “Remain In Place” for each Parcel.
    - a. Reference to protection of trees and plants shall include the surrounding surface material designated to Remain In Place in accordance with **SECTION 31 23 16 – EXCAVATION**.
  - 2. This responsibility shall also include all replacement plants the Contractor plants in areas where other Work is still being performed.
- B. Contractor shall provide protective covers, barriers, fences or equal means to protect trees and plants identified by Ecology as needing to be preserved during Work.
- C. Plants or trees identified by Ecology as needing to be protected and preserved during Work that are damaged or destroyed by the Work shall be replaced by the Contractor at no additional cost to Ecology.

**1.02 REFERENCES**

- A. **SECTION 31 23 16 - EXCAVATION**

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 PROCEDURES**

- A. Delineate the Critical Root Zone (CRZ) using plainly visible markings (e.g., paint or flagging) of individual trees or around perimeter CRZ of groups of trees to remain.
- B. Plants to remain shall be temporarily covered with clear plastic sheeting or equal during excavation activities in the plant’s vicinity, to prevent contaminated soil accumulating on plants during the Work. Covers shall be removed promptly after Work in the vicinity of the plants is completed.
- C. Exposed root balls/masses of trees and plants and tree roots greater than two (2) inches in diameter shall be covered in burlap or equal, which shall be kept moist during the Work.
- D. Hand tools shall be used to place import fill and topsoil in the vicinity of plants and trees to be preserved and protected. Import fill compacted in the

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 56 39 – TEMPORARY TREE AND PLANT PROTECTION**

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vicinity of plants and trees shall involve the use of small plate compactors or equal equipment easily maneuvered and manipulated to protect and preserve the plant or tree.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. The Contractor shall be responsible for implementing, maintaining, monitoring and supplementing silt control measures, storm water runoff control measures and additional Best Management Practices (BMPs) for the implementation and maintenance of a comprehensive erosion control plan in accordance with City of Everett requirements, the requirements of the construction storm water permit for the Project, the Surface Water Pollution Prevention Plan (SWPPP), and the requirements of a National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Storm Water Discharges Associated With Construction Activity for the Project.
- B. The information provided in the Contract Documents shall be considered a minimum for the anticipated construction and conditions. The Contractor shall be responsible for adding additional BMPs as conditions change at no additional cost to Ecology.
- C. The Contractor shall coordinate installation and inspections of the BMP's with City of Everett and Ecology inspectors as necessary. Additional BMPs shall be stockpiled at the Project Site as requested by the City of Everett and/or Ecology inspectors.

**1.02 PERMITS**

- A. A National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Storm Water Discharges Associated with Construction Activity for the Project is currently maintained by the Department of Ecology.
  - 1. The NPDES permit number is WAR301681. Contractor shall conform to all requirements of this permit, unless otherwise authorized by Ecology in writing.
  - 2. The Contractor shall submit a Transfer of Coverage form as part of taking operational control of the site to transfer NPDES permit coverage.

**1.03 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.04 SUBMITTALS**

- A. The Contractor shall prepare and submit a Surface Water Pollution Prevention Plan (SWPPP) to Ecology at least two (2) weeks prior to mobilization.

**DIVISION 01 – GENERAL REQUIREMENTS**

**SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**

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- B. The Contractor shall prepare and submit a Transfer of Coverage form to Ecology to transfer permit coverage for the NPDES permit at least two (2) weeks prior to mobilization.
- C. If requested by Ecology, the Contractor shall submit to Ecology Product catalog cuts for filter fabric fence and filter bag inserts to be used for the Work.
- D. Contractor shall be responsible for submitting monthly discharge reports in accordance with the Project’s NPDES permit. These reports shall be uploaded on a monthly basis to the Department of Ecology’s WebDMR system.
  - 1. Contractor shall be responsible for all fines or penalties as a consequence of failure to submit monthly reports in a timely fashion.

**1.05 REGULATORY REQUIREMENTS**

- A. The Contractor shall comply with all applicable Ecology and City of Everett regulations and standards.
- B. Contractor shall conform to all requirements in the NPDES permit including, but not limited to, the following:
  - 1. Prepare and maintain the SWPPP.
  - 2. Submit monthly discharge reports to Ecology’s WebDMR system as required by the Project NPDES permit.
  - 3. Have a Certified Erosion Control Lead on-site and available.
  - 4. All water quality testing required by the City of Everett to discharge construction storm water into the City combined sewer.

**1.06 SEQUENCING AND SCHEDULING**

- A. The facilities for the comprehensive erosion control plan for the Project must be coordinated by the Contractor with all clearing and grading activities, and in such a manner as to ensure that sediment-laden water does not enter the City of Everett combined sewer, violate applicable water standards of the City of Everett and the Washington State Department of Ecology, or adversely impact adjacent properties.
  - 1. Contractor shall install and verify the working condition of all erosion control measures and other BMPs in Work areas at the Project site prior to any clearing, grubbing, demolition, general site grading or other construction.
- B. Erosion control items shall be installed and removed at various times throughout the Contract Time of the Project.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**

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- C. Contractor shall locate existing catch basins and related storm water drainage features that may be impacted by construction activities during the Project. Protection of these catch basins and related storm water drainage features shall be coordinated with the Work by the Contractor.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

- A. Filter Fabric Fence (“silt fence”): This material shall be in accordance with WSDOT Standard Specifications Section 9-33, Temporary Silt Fence (Table 6).
- B. Straw Mulching: This material shall be in accordance with WSDOT Standard Specifications Section 9-14.4(1) 89
- C. Filter Fabric: Mirifi 140N or equal.
- D. Filter Bag Inserts (“siltsac inserts”): Commercially manufactured filter bags specifically manufactured for silt filtering and which will provide filtering performance required. Contractor shall verify current standards for material and usage with the City of Everett.
- E. Polyethylene Sheeting: This material shall be in accordance with WSDOT Standard Specifications Section 9-14.5(3).
- F. Sandbags for anchoring Polyethylene Sheeting.

**PART 3 - EXECUTION**

**3.01 EROSION AND SEDIMENT PREVENTION MEASURES**

- A. Where possible, maintain natural vegetation for silt control.
- B. Prevent silt-laden water from leaving Project Site or from entering off-site storm sewer systems.
- C. All slopes, cut, or fill areas where Work has stopped for more than 30 days shall be stabilized by mulching, polyethylene sheeting or other method to prevent erosion and sediment transport.
- D. All stockpiled materials for both import and export shall be covered by polyethylene sheeting or other method to prevent erosion and sediment transport.
- E. Keep all off-site parking areas and streets clean from construction activities.
  - 1. Where soil and other Work debris on paved surfaces is not contaminated soil from the Project Site, Contractor shall keep paved surfaces clean by the use of mechanical sweeping equipment, hand

## **DIVISION 01 – GENERAL REQUIREMENTS**

### **SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**

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- shovels and brooms or other accepted methods suitable of removing dirt, rock, silt and sand.
- 2. Where soil and other Work debris on paved surfaces is contaminated soil from the Project Site, Contractor shall keep paved surfaces clean by the use of mechanical vacuum sweeping equipment or other accepted methods suitable of removing dirt, rock, silt and sand and permitting safe and legal disposal of swept-up material.
- 3. No street washing will be allowed.
- F. At project completion, all areas damaged by temporary erosion and sediment controls (trenches for silt fencing, damaged grass below straw wattles) shall be repaired to pre-construction conditions.

#### **3.02 MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES**

- A. The implementation of the comprehensive erosion control plan, and the maintenance, replacement and upgrading of these facilities shall be the responsibility of the Contractor until Substantial Completion.
  - 1. During the Contract Time, erosion control facilities installed by the Contractor may require maintenance, relocation or upgrading (e.g. additional sumps, relocation of ditches and silt fences, etc.). This Work shall be performed by the Contractor as needed.
  - 2. Contractor shall pay for all costs associated with the construction, maintenance, upgrading and removal of the erosion control facilities throughout the Contract Time.
- B. Contractor shall monitor and maintain erosion and silt control measures and other BMPs throughout the Contract Time of the Project.
  - 1. Remove accumulations of sediment when more than 50 percent of silt storage capacity is filled.
- C. Contractor shall provide continuous monitoring as required by the NPDES permit.
- D. Contractor shall inspect and repair temporary erosion control facilities as needed.
  - 1. Inspections by the Contractor shall occur a minimum of once per week; during and after storms or other, similar weather events; and prior to weekends and holidays.
- E. Adequate temporary and permanent control of surface water runoff and subsurface seepage will be required in order to allow site access, grading, and construction of underground utilities to proceed.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**

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**3.03 WET WEATHER GUIDELINES**

- A. Site preparation and initial construction activities should be planned to minimize disturbance to the existing ground surface during extended wet weather periods when the presence of excess moisture will render the site soils more prone to excessive disturbance.
- B. During wet Project Site conditions:
  - 1. Equipment traffic should not be allowed on exposed subgrade areas. Erosion of the soil will occur as exposed surfaces are disturbed due to construction activity and exposure to climatic conditions.
  - 2. The Contractor shall be responsible for protecting disturbed or prepared surfaces by some form of weather cover if left exposed for more than two (2) days.
  - 3. Contractor shall protect disturbed or prepared surfaces from surface ponding, storm water runoff, and construction traffic.
  - 4. The Contractor will be solely responsible for any repairs required to these surfaces at no additional cost to Ecology.

**3.04 STREET AND PUBLIC SIDEWALK CLEANING**

- A. Contractor shall sweep truck exteriors before trucks leave the Project Site, and shall sweep truck loading areas and vehicle and equipment traffic areas in public rights-of-way and on public sidewalks not closed to the public between truck loads and construction vehicle and equipment traffic, as necessary to prevent dirt from being carried onto and accumulating on public streets.
- B. If streets or public sidewalks not closed to the public are fouled or when directed by Ecology, Contractor shall clean them with a vacuum sweeper truck or equal in conformance with City of Everett and all governing requirements and regulations.

**3.05 TURBIDITY MONITORING**

- A. The Contractor shall be responsible for meeting turbidity and pH requirements as required by the City of Everett and the NPDES permit.
- B. Additional erosion and sediment control measures may be required to achieve discharge requirements. The Contractor shall be responsible for installing and maintaining additional measures as work progresses to meet turbidity requirements.
- C. Turbidity monitoring and reporting will be required daily during construction in the rainy season (November 1st through April 30th) and weekly between May 1 and October 31.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**

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- D. Turbidity reports may not be necessary during extended periods of low flow or no flow conditions.
  - 1. The Contractor shall coordinate arrangements with the City of Everett during extended periods of low flow or no flow conditions, and shall make available the monitoring reports to Ecology and the City of Everett upon request.
  - 2. Due to the anticipated low flow or no flow conditions during the drier summer months, storm water flow may cease, causing an interruption in the turbidity monitoring and reporting.
- E. The benchmark for turbidity is defined as:
  - 1. 25 NTU (nephelometric turbidity units)
  - 2. The Contractor shall refer to the NPDES Permit for remedial measures when storm water discharging from the Project Site has a turbidity measurement higher than 25 NTU.
- F. If during the Contract Time the monitoring reports indicate that the threshold level of turbidity is exceeded, the monitor must report the condition to the City of Everett immediately, or as soon as practical.
  - 1. The Contractor shall maintain a stockpile of materials to implement additional BMP measures as required during construction to bring the Project into compliance when the threshold level of turbidity has been exceeded.

**3.06 SILT FENCING INSTALLATION**

- A. Before installing silt fencing, Contractor shall lay out the limits of the Work area to install fence. Contractor shall field-adjust the alignment to the perimeter of Work areas.
  - 1. Perform clearing or other Work required to installing erosion control.
- B. Cast all trench excavation soils from fence installation to the Work side of fence.
- C. Overlap filter fabric fence joints minimum 1 foot prior to backfilling the trench for the fence.

**3.07 OTHER EROSION AND SEDIMENT CONTROLS INSTALLATION**

- A. For polyethylene sheeting, the Contractor shall overlap joints a minimum of 24 inches.
  - 1. Overlap in direction of drainage and prevent water from draining onto material being protected.
  - 2. Secure sheeting in place to prevent movement and damage.











**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall conduct cleaning and waste disposal operations in full compliance with local laws and ordinances, and with federal and local environmental and anti-pollution regulations.
  - 1. Comply with governing regulations and safety standards for cleaning operations.
  - 2. Remove waste materials from the site and dispose of in a lawful manner.
  - 3. Where extra materials of value remain after completion of associated construction, dispose of these materials as directed by Ecology.
  - 4. Cleaning activities shall include hauling routes and other areas located outside the Project Site that are used as part of the Work.
- B. The Contractor shall not dispose of volatile wastes such as mineral spirits, oil or paint thinner in combined sewer drains.
- C. Burning or burying of debris, rubbish or other waste material within the Project Site will not be permitted.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTALS**

- A. Submit Material Safety Data Sheets and maintain a MSDS file at the Project Site during Work.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 LEANING AND PROTECTION DURING CONSTRUCTION**

- A. During handling and installation, Contractor shall clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration before Substantial Completion.
- B. Use cleaning materials and agents recommended by the manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property, or that might damage finished surfaces. Submit Material Safety Data Sheets and maintain a MSDS file at the Project Site during Work.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**

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- C. Contractor shall clean and maintain completed Work as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- D. Contractor shall supervise construction activities to ensure that no part of the Work, completed or in progress, shall be subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
  - 1. Excessive static or dynamic loading
  - 2. Excessively high or low temperatures
  - 3. Thermal shock
  - 4. Excessive high or low humidity
  - 5. Water or ice
  - 6. Solvents
  - 7. Chemicals
  - 8. Asphalt roofing tar
  - 9. Puncture
  - 10. Abrasion
  - 11. Heavy traffic
  - 12. Soiling, staining and corrosion
  - 13. Rodent and insect infestation
  - 14. Combustion
  - 15. Electrical current
  - 16. Unusual wear or other misuse
  - 17. Misalignment
  - 18. Contact between incompatible materials
  - 19. Excessive weathering
  - 20. Unprotected storage
  - 21. Improper shipping or handling
  - 22. Theft
  - 23. Vandalism
  - 24. Overspray from painting and fireproofing

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**

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**3.02 COLLECTION AND DISPOSAL OF WASTE**

- A. Collect waste from construction areas and vicinity of the Project Site daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.
- B. All dumpsters are to be maintained within Work areas and shall not be open or accessible to the public or be located in a public right-of-way.

**3.03 FINAL CLEANING**

- A. Before Final Completion, final cleaning of the Project Site shall be performed by the Contractor. Contractor shall leave the Project Site, including all Properties in the Project Site, all adjacent properties, and all adjacent City rights-of-way in a clean, neat, and orderly condition satisfactory to Ecology.
  - 1. Employ experienced workers or professional cleaners for final cleaning.
  - 2. Clean the Project site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste materials, litter and foreign substances. Sweep paved areas broom clean. Remove petrochemical spills, stains and other foreign deposits.
  - 3. Remove tools, construction equipment, machinery and surplus material from the Project Site.
  - 4. Touch-up and otherwise repair and restore marred exposed finishes and surfaces resulting from the Work. Replace finishes and surfaces that cannot be satisfactorily repaired or restored, or that show evidence of repair or restoration.
  - 5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances.
  - 6. Clean exterior building walls/walkways and overhangs.
- B. If Contractor fails to clean up the Project Site to the satisfaction of Ecology, after reasonable notice is provided by Ecology, Ecology may do so and the costs incurred by Ecology shall be charged to Contractor.

END OF SECTION

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 77 00 – CLOSEOUT PROCEDURES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION**

- A. Contractor shall refer to **SECTION 00 72 00 – GENERAL CONDITIONS** for the definition, guidance and requirements for Substantial Completion, Final Completion, and Final Acceptance.
- B. These requirements include, but are not limited to, Contractor's notification requirements to Ecology, specified inspections, and submittal of Project Record documents.

**1.02 SUBSTANTIAL COMPLETION DEFINITION FOR THIS PROJECT**

- A. Payment will be held to no more than 90 percent of the contract amount when the project achieves Substantial Completion. .
- B. Substantial Completion shall include, but not be limited to, the following for all Properties in the Project:
  - 1. All earthwork completed.
  - 2. All lawn sod restoration completed.
    - a. Maintenance and finishing periods shall be in-progress and/or completed for all Properties.
  - 3. All gravel surfacing restoration completed.
  - 4. All new hardscape work (concrete and asphalt) completed.
  - 5. All retaining wall and other structural construction completed.
  - 6. Most or all hardscape repair work completed.
  - 7. Most or all fence and landscape feature restoration completed.
  - 8. Most or all planting of replacement trees, shrubs, and vegetation completed.
  - 9. Most or all correction of grade issues identified by surveying after sod placed completed.
- C. Where reference is made in the Contract Documents to Substantial Completion of individual Properties in the Project Site, this definition shall be applied unless otherwise specified by Ecology in writing.

**1.03 SUBSTANTIAL COMPLETION INSPECTION**

- A. Contractor shall give Ecology a minimum of ten (10) days' notice to request a Substantial Completion inspection. Included in that time is the required notification Ecology must provide to all Property Owners and Tenants.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 77 00 – CLOSEOUT PROCEDURES**

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1. Subject to Ecology availability, Contractor may schedule more than one (1) day of inspection in order to inspect all Properties.
- B. Before requesting inspection for Substantial Completion by Ecology, the Contractor shall complete the following activities.
  1. Unless required for continuing maintenance and finishing Work on Properties and/or permitted Work as specified in this Section, Contractor shall discontinue use and remove temporary facilities and utilities from the Project Site. Contractor shall also remove all construction tools, mock-ups, and similar elements.
  2. Unless required for either continuing maintenance and finishing Work on Properties and/or permitted Work as specified in this Section, Contractor shall remove all temporary protection and facilities installed for protection of the Work and vegetation, buildings, structures, and other site features and improvements that were protected during Work.
- C. On receipt of a request for an inspection for Substantial Completion by Ecology, Ecology shall proceed with the inspection with the Contractor. This inspection shall include the development of a punch list of items that either require the Contractor's attention and correction in order to achieve Substantial Completion, or, to identify work remaining to be accomplished in order for the contractor to achieve Final Completion of the Project.
  1. Ecology may add additional items to the punch list at any time between Substantial Completion and Final Completion.
- D. If the Project is not deemed Substantially Complete, Ecology shall conduct a repeat inspection when requested by the Contractor, provided the Contractor assures Ecology that the Work is Substantially Completed.
  1. Ecology shall issue a written notice of Substantial Completion following this inspection or shall advise Contractor of Work that must be corrected or completed before the notice will be issued.
- E. Results of the completed Substantial Completion inspection shall form the basis of identifying any outstanding requirements for achieving Final Completion.

**1.04 PROJECT RECORD REVIEW**

- A. As part of the inspection for Substantial Completion, Contractor shall provide Ecology a draft of the Project Record file for review in a binder that includes a table of contents and contents easily identifiable by the use of dividers.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 77 00 – CLOSEOUT PROCEDURES**

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1. Project Record shall include all material and equipment submittals, change orders, RFIs, survey documentation, disposal facility weigh tickets or receipts, warranties, approved permits, and the record of as built construction.
- B. The Contractor shall incorporate any comments received from Ecology into the final Record Document file and deliver to Ecology prior to Final Completion.

**1.05 FINAL COMPLETION INSPECTION**

- A. Upon completion of all punch list items identified during the Substantial Completion inspection and the completion of all remaining Work items identified by Ecology or Contractor as the specified Maintenance and Finishing Periods are completed for all Properties, Contractor and Ecology shall together perform an inspection visit of Properties to verify that Contract requirements for each Property, including corrective actions on punch list items, have been completed.
- B. Contractor shall provide Ecology a minimum of ten (10) days' notice to request a Final Completion inspection. Included in that time is the required notification Ecology must provide to all Property Owners and Tenants.
- C. On verification that all project work has been completed, and upon receipt of the completed Project Record file, Ecology shall issue a Notice of Final Completion to the Contractor.

**1.06 FINAL ACCEPTANCE**

- A. Ecology shall issue the Notice of Final Acceptance when all Contract-related documents have been presented to Ecology, including reconciliation of any outstanding Change Orders, written notifications by the Contractor of any claims or disputes associated with the Project, and the submission of the final invoice for payment from the Contractor.

**1.07 WARRANTY INSPECTION**

- A. An inspection visit of the Work shall be performed by Contractor and Ecology approximately 4 weeks prior to the end of the 12 month warranty period that begins at Substantial Completion.
  1. Contractor shall contact Ecology to coordinate these inspection visits a minimum of two (2) calendar weeks in advance.
- B. During this inspection visit, Contractor and Ecology shall view the condition of Work since Final Completion, verify whether the Work still meets the requirements and Specifications of the Contract Documents, and identify deficiencies in the Work that do not conform to the Contract Documents.

**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 01 77 00 – CLOSEOUT PROCEDURES**

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1. Work under warranty that does not meet the requirements and Specifications of the Contract Documents shall be considered Remedy Work and scheduled for repair or replacement, as appropriate.

**1.08 REMEDY WORK**

- A. Scheduling for Remedy Work shall be submitted to Ecology by Contractor after the warranty inspection visit. All Remedy Work shall be performed and completed no later than thirty (30) calendar days after the inspection visit, unless otherwise authorized by Ecology.
- B. Work to be remedied shall be replaced or rebuilt to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work that is not in compliance with the Contract Documents

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 21 13 – SURVEYS**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Prior to commencing excavation for the Work, the Contractor shall perform all surveying necessary and specified herein for the restoration of the topography for each Property in the Project Site. This Section provides the minimum requirements for each Property.
  - 1. The site survey shall be sufficient in detail to document site features and drainage.
  - 2. Survey shall be performed with adequate precision and data density to meet the requirements of this Section and the tolerances indicated in other Sections.
  - 3. Surveying references and benchmarks shall be established by the Contractor in fashions that shall not be disturbed by the Work. The Contractor shall be responsible for maintaining and, if necessary, repairing all references and benchmarks established for the Work.
- B. The Contractor shall provide additional surveying as necessary and relevant for the restoration of pre-construction topography for each Property.
- C. Where necessary due to the presence of significant or complicated topography for a Property, the Contractor shall retain the services of a surveyor licensed in the State of Washington to survey surface elevations.
  - 1. If requested by Ecology, Contractor shall provide services of a licensed surveyor thru a Work Change Directive.

**1.02 SUBMITTALS**

- A. Surveying Schedule.
  - 1. Submit a surveying schedule with the Preliminary Project Schedule submittal in order to complete the surveying requirements at each Property before commencing clearing, grubbing and/or earthwork.
  - 2. Contractor surveying schedule shall provide Ecology a minimum of seven (7) calendar days' notice in advance of Contractor activities for each Property to permit notification of Property Owners and Tenants.
- B. Pre-construction surveys.
  - 1. All surveys of pre-construction conditions for all Properties shall be completed and submitted by Contractor at least 2 days prior to the

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 21 13 – SURVEYS**

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commencement of clearing, grubbing, and earthwork at the Project Site, unless otherwise permitted by Ecology in writing.

2. Contractor shall coordinate Work so surveying and existing condition assessments specified in **SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS** can be performed concurrently.
- C. Post-excavation surveys.
1. Submit post-excavation survey data upon completion of excavation and with sufficient time for Ecology's review prior to beginning backfill activities.
- D. Post-construction surveys.
1. Submit survey data obtained during Work for each Property, as requested by Ecology, and with the Project Record for Substantial Completion.

**1.03 DIMENSIONS AND LAYOUTS**

- A. The Contractor shall be responsible for furnishing, setting and marking all line and location stakes, including offsets and general construction staking. When Work requiring control is being performed, all necessary related equipment, supplies and instruments shall be at the Project Site and used for the Work. A qualified layout engineer, surveyor, or technical specialist must be assigned to the Contractor's crew for this Work. This equipment and personnel must be available, at no additional cost to Ecology for the purpose of verifying layout, conformance of grading design and required tolerance precision for grading, correct restoration to the final elevation points and marks, and certifying the accuracy of Work.
- B. Contractor is responsible for preserving all benchmarks, stakes, and markings on existing features; and the replacement of any that are displaced or missing.
1. Contractor is responsible for replacing all benchmarks, stakes, and markings disturbed between the time pre-construction surveys are performed at each Property and the time Work is completed at each Property.
  2. Contractor shall use methods that allow for potential disturbance of benchmarks, stacks, and markings by Property Owners and/or Tenants.

**PART 2 - PRODUCTS (NOT USED)**

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 21 13 – SURVEYS**

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**PART 3 - EXECUTION**

**3.01 PROPERTY BOUNDARY SURVEY**

- A. Contractor shall survey the property lines for each Property in the Project Site and clearly mark the property corners prior to commencing Work. Reference information for the property line alignments shall be obtained from the most up-to-date version of Snohomish County Tax Parcel records by Contractor.
1. Property lines indicated on the site maps in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION** represent property boundary information obtained from Snohomish County Tax Parcel records in June 2010 and are provided for reference only.
  2. Contractor shall not allow Work to damage adjacent Properties or site features within those Properties.
  3. Work for each Property shall be extended into the City of Everett public right-of-way, up to the City-owned hardscape (i.e. concrete sidewalk, curb, or asphalt or concrete-paved street, as applicable). The areas between the property line nearest the City right-of-way and the City-owned hardscape have been included in the quantities specified for each Property in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- B. Permission for extending the Work into these areas of public right-of-way has been granted to Ecology by the City of Everett in accordance with Ecology's agreements with the City of Everett regarding the performance of this Work.

**3.02 ELEVATION CONTROL SURVEY**

- A. Contractor shall survey a grid of area elevation control points for each Property in all areas where Work shall be performed. Surveys of area elevation control points shall include both horizontal and vertical dimensions from a known benchmark maintained throughout the Work.
1. Area elevation control points shall be located on a grid with a maximum spacing of ten (10) horizontal feet between survey points.
  2. Area elevation control points shall capture all changes in grade.
  3. Area elevation control points shall not be located within two (2) horizontal feet of any building or site feature specified to Remain In Place, unless compliance with this requirement shall prevent the

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 21 13 – SURVEYS**

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location of any elevation points (such as between structures or site features less than four (4) feet apart).

4. Area elevation control points shall not be located within six (6) horizontal feet of the base of mature trees having a diameter of twelve (12) inches or greater (as measured four (4) vertical feet from the tree base) and specified in the Contract Documents to Remain In Place.
  5. For any slope in a Property greater than three (3) vertical feet in elevation change and steeper than 3 (horizontal) to 1 (vertical), Contractor shall collect additional area elevation control points as necessary to provide a minimum of three (3) elevation control points for each ten (10) horizontal feet of slope. The minimum three (3) elevation control points shall be located at the crest, toe, and approximate middle of the slope.
- B. Contractor shall survey and mark final elevation control marks on buildings and surface of permanent site features specified as Remain In Place that are directly bordering and/or immediately adjacent to all excavated areas. This shall include, but not be limited to, buildings, pavement edges, sidewalk edges, walls, patios, fence posts that Remain in Place, and fence posts the Contractor does not anticipate removing. Survey of final elevation control marks shall include both horizontal and vertical from a known benchmark maintained throughout the Work.
1. Marks shall have a maximum horizontal spacing of ten (10) feet.
  2. Marks shall be maintained by Contractor until final grading and specified surface restoration has been completed.
  3. Contractor shall completely remove all final elevation control marks before Final Completion.
- C. Drainage concerns on each Property shall be immediately brought to Ecology's attention for resolution.

**3.03 EXISTING SITE FEATURE SURVEY**

- A. For each Property, Contractor shall survey the alignments of existing walls, fences, landscape beds and other distinguishable finish surface types, rockeries and rock-covered slopes. Contractor shall use the survey as the basis for the construction or reconstruction of site features, including differences in adjacent grades, such as a lawn to landscape bed interface.
1. Unless otherwise indicated, the base of the existing wall, rockery or rock-covered slope shall be used for the alignment of reconstructed

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 21 13 – SURVEYS**

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- existing walls or the replacement of rockeries or rock-covered slopes by walls.
2. Surveys of retaining walls shall include elevations for both top and bottom of wall for every ten (10) lineal feet of wall.
- B. For each Property, Contractor shall survey the horizontal locations and elevations of the surface feature elements of all private utilities. This shall include, but not be limited to, irrigation/sprinkler heads, utility access boxes, control systems, and surface piping and appurtenances. Contractor shall use the survey as the basis for the construction or reconstruction of preconstruction private utilities.
- C. For each Property, Contractor shall survey the horizontal locations and, for site features above the preconstruction ground surface, vertical height of each feature. This shall include, but not be limited to, clothesline poles, fence posts, buildings and other structures (if disturbed by Work), and other site and landscape structures and features (if disturbed by Work).

**3.04 SURVEY OF TOPOGRAPHY DURING WORK**

- A. Contractor shall regularly verify Work is being performed in conformance with relative depths below all elevation control points and final elevation control marks, in order to verify conformance the tolerances specified for each type of Work.
- B. At a minimum, survey data shall be collected and recorded by Contractor after excavation to depth specified for each Decision Unit of each Property as specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- C. Ecology may request the Contractor collect and record survey data at the following stages of the Work:
1. After backfill and compaction of common fill completed for all control points and marks for each Decision Unit of each Property.
  2. After backfill and light rolling of topsoil completed for all control points and marks for each Decision Unit of each Property.
- D. Once restoration Work in the vicinity of each elevation control point and final elevation mark for each Decision Unit of each Property is complete, Contractor shall survey each elevation control point and final elevation mark a minimum of one (1) time during the Maintenance and Finishing Period for each Property.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 21 13 – SURVEYS**

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1. Contractor shall survey between forty-five (45) and sixty (60) calendar days into the Maintenance and Finishing Period for each Property.
- E. Where surveying performed after restoration Work has been completed, but before Final Completion of the Project, indicates the ground in the vicinity of an elevation control point and/or final elevation control mark has settled below the specified tolerance for surface restoration, Contractor shall determine area of settlement, restore grade with additional subgrade material representative of that used (e.g. topsoil in areas of sod) to an elevation that satisfies final grade requirements once surface materials are reinstalled. Settlement corrections shall be at no additional cost to Ecology.
- F. If other Project data demonstrates suspect grading results, additional surveying of elevation control points and verification of restored grade to final elevation control marks may be requested by Ecology at any time up until Final Completion, to verify surface topography has been restored to pre-construction elevations and topography.
1. Additional surveying shall be at no additional cost to Ecology.
- G. Contractor shall provide current and past survey data during Contract Time for all Properties where Work has been performed or is in the process of being performed, as requested by Ecology. All survey data shall be included in the Project Record for submission to Ecology before Final Completion.

END OF SECTION

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Prior to commencing excavation or disturbing each Property, Contractor shall perform all necessary existing conditions assessments for each Property as to facilitate and permit the Contractor to return and restore the Property to match its original condition or conditions as specified in the Contract Documents.
- B. Existing conditions assessments shall include, but are not limited to:
  - 1. Photographic and/or video documentation of the exterior of the Property before commencing construction. This documentation shall include the exterior visual and physical condition of buildings and other structures present on the Property.
  - 2. Survey of existing surface grades and elevations in accordance with **SECTION 02 21 13 - SURVEYS**.
  - 3. Inventories of trees, shrubs, ground cover, and vegetation to be replaced during the restoration of each Property. Inventory shall be prepared by Contractor or representative of the Contractor's nursery, garden, and/or greenhouse supplier(s); and shall include specific identification and locations of the specific trees, shrubs, ground cover, and vegetation.
- C. The Contractor shall provide photographs or videotape, sufficiently detailed, depicting existing conditions of adjoining buildings and construction and site improvements whose alteration or marring might be misconstrued as damage caused by selective demolition operations.
- D. Contractor shall verify with Ecology the limits of clearing, tree and plant removal, and site improvement and development removal with Ecology prior to commencing work. Prior to beginning site removals and clearing for each Property, Contractor shall meet with an Ecology Representative and review all proposed utility layouts on site. Contractor shall indicate all existing trees, shrubs and landscaping as well as site improvements that will be affected by construction.

**1.02 SUBMITTALS**

- A. Contractor shall submit an existing conditions assessment schedule with the Preliminary Project Schedule submittal demonstrating the schedule to

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**

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complete the existing conditions assessment requirements for each Property.

1. Existing conditions assessments for all Properties in Project Site shall be completed before clearing, grubbing, or earthwork is begun on any Property in the Project Site, unless otherwise permitted by Ecology in writing.
  2. Contractor existing conditions assessment schedule shall provide Ecology a minimum of eight (8) calendar days' notice in advance of Contractor activities for each Property to permit notification of Property Owners and Tenants.
  3. Contractor may coordinate this Work so existing condition assessments and surveying specified in **SECTION 02 21 13 – SURVEYS** can be performed concurrently.
- B. At least two (2) weeks prior to the start of excavation and before proceeding with Contractor's existing conditions assessments of individual Properties, Contractor shall submit to Ecology the Contractor's Surface and Landscape Restoration Quality Control Plan for maintaining quality control for the surface and landscape restoration of all Properties and conformance with all Specifications.
1. This plan shall incorporate, but not be limited to, the following elements:
    - a. Description of methods for comprehensive documentation of existing conditions for each Property.
    - b. Description of methods for surveying all required elevation benchmarks, references, and control points for each Property as specified in **SECTION 02 21 13 – SURVEYS**. This shall include establishment of initial points, frequency of verification of elevation control during Work, final confirmation and documentation at each significant stage of Work, and removal as necessary of marks on existing site features and buildings.
    - c. Plant variety identification. This shall include planning to permit sufficient time for Ecology communications with Property Owner and/or Tenant(s) without causing delay to the Work. This shall also include Contractor verification of availability of all replacement plants within the Contract Time.
    - d. Identification of sources for replacement materials where Contractor removes pre-construction materials of site features during Work.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**

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- e. Plans for removing, handling, cleaning, storing, and reinstalling site feature materials specified Remove and Reinstall. This shall include procedures for making requests of Ecology to use new materials as replacements in and for site features specified Remove and Reinstall during Work.
  - f. Determination of location and configuration of original site and landscape features to be restored.
  - g. Determination of locations of replacement plants, shrubs, and trees to restore to original location unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION.**
  - h. Communication and coordination of all existing site assessment materials, data, and restoration information with field personnel crews and subcontractors.
  - i. Procedures for identification and protection of buildings and site features specified to Remain In Place during Work.
  - j. Communication of questions to Ecology relating to landscape restoration. Sufficient time shall be provided for Ecology communications with Property Owner and Tenant(s).
  - k. Contractor verification of accuracy of landscape restoration for each Property.
  - l. All other quality control procedures determined by Contractor to be necessary to meet the Contract Documents.
- C. Contractor shall provide existing conditions assessments for all Properties in Project Site before clearing, grubbing, or earthwork is begun on any Property in the Project Site.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 UTILITY LOCATION**

- A. Contractor shall locate all existing utilities so as to avoid damage or disturbance. For aid in utility location call “Dial Dig 1-800-424-5555” a minimum of two (2) working days prior to beginning Work on any Property.

## **DIVISION 02 – EXISTING CONDITIONS**

### **SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**

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- B. Contractor shall provide and pay for additional marking as required to locate private and auxiliary utilities for each Property at no additional cost to Ecology.
- C. Contractor is responsible for avoiding damage to all marked and located utilities.
- D. Contractor shall notify Ecology promptly if underground utilities not shown in the Contract Documents are identified through the Contractor's location efforts or are encountered.

#### **3.02 INVENTORY OF AREA SHAPES AND CONTENT FOR SITE FEATURES**

- A. Contractor shall include in Contractor's existing conditions assessment and documentation of each Property sufficient description of the alignment(s) of landscape beds. The individual site maps in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION** do not necessarily represent accurately all lines and curves associated with each feature.
- B. Where curves exist in site feature area edges, Contractor shall obtain all visual documentation and measurements to permit accurate restoration of curves during Work for each Property.

#### **3.03 CLARIFICATION ON IDENTIFYING AREA SURFACES**

- A. In areas where pre-construction grass is observed to be sparse or partially overgrown by weeds, and the area is not individually specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION** with a different surface restoration direction, Contractor shall restore these areas with sod.
- B. Where Contractor cannot determine a pre-construction surface for a Property during Contractor's existing conditions assessment after review of the Specifications for that Property, Contractor shall issue a Request for Interpretation (RFI) and receive a response from Ecology prior to clearing Work on that Property.

#### **3.04 TREE/SHRUB/VEGETATION INVENTORY**

- A. Contractor shall include in Contractor's existing conditions assessment and documentation of each Property an inventory of all the trees, shrubs, and other vegetation specified to either be Removed and Replaced In Kind or Remain In Place. The purpose of the assessment shall be to determine an accurate and detailed list of "in kind" replacements of all existing trees,

## **DIVISION 02 – EXISTING CONDITIONS**

### **SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**

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shrubs, ground cover and other plants to be Removed and Replaced In Kind, or be protected as Remain In Place during the Work, unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.

- B. Inventories of trees, shrubs, and other vegetation shall include locations in order to restore replacements to their preconstruction locations, unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- C. Contractor shall involve representatives of Contractor's nurseries and other plant suppliers in assessments as necessary to provide accurate identification of all trees, shrubs, and other vegetation specified to be Removed and Replaced In Kind in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- D. If uncertainty remains regarding the identification of specific trees, shrubs, and other vegetation, Contractor shall notify Ecology promptly.
  - 1. Where possible, Ecology provided specifically-requested colors and/or varieties for vegetation, shrubs and trees in the Work area in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
  - 2. When possible, Ecology shall continue to gather as much information on existing vegetation, shrubs, bulbs and trees as possible during the construction period. Ecology shall communicate information to Contractor promptly.
  - 3. If no further information on specific variety or color is available by the time of landscape restoration, Contractor shall match as accurately as possible the kind and type of each pre-construction tree, shrub, and other vegetation.

#### **3.05 SITE FEATURE INVENTORY**

- A. Contractor shall include in Contractor's existing conditions assessment and documentation of each Property an inventory of all non-living site features and structures specified to be Removed, Removed and Reinstalled, Removed and Salvaged and Remain in Place. The purpose of the assessment shall be to determine an accurate and detailed list of site features for each Property that may or shall be affected by Contractor's Work.
  - 1. This shall include smaller site features contained within larger features, such as edging as a part of specified landscape beds.

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### **SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**

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- B. Inventories of site features shall include locations and, as applicable, alignment and orientation information, in order to reinstall or replace site features to their preconstruction locations and configurations, unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- C. Contractor existing conditions assessment shall verify that Contractor can obtain same new materials during Contract Time in instances where Contractor shall replace materials of site features rather than reinstall site features with pre-construction materials.
- D. If uncertainty existing about Contractor's ability to preserve site features specified to Remain in Place and/or Remove and Reinstall individual site features as specified in the Project Manual, Contractor shall notify Ecology promptly through the RFI process.

#### **3.06 UNFORSEEN PHYSICAL CONDITIONS**

- A. If Contractor encounters conditions at the Project Site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Project Manual, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Project Manual, then Contractor shall give written notice to Ecology promptly before conditions are disturbed and in no event later than seven (7) calendar days after the first observance of the conditions.

END OF SECTION

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Select site features and improvements in the Project Site shall be demolished by Contractor. Demolished select site features are either to be salvaged, reinstalled, or replaced after completion of earthwork.
1. Existing site features being replaced shall be removed from the Project Site for proper disposal.
  2. Site features and improvements subject to selective site demolition are identified and specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- B. Additionally, the Contractor shall remove all landscape features and improvements in the areas of Work before commencing excavations unless specified as Remain in Place. Removed landscape features and improvements shall be restored by Contractor in their pre-construction condition and configuration and using the original materials removed, unless otherwise indicated in the Contract Documents.
1. Contractor shall store original materials onsite to be reused during restoration Work.
  2. Contractor may store original materials offsite provided Contractor can provide a suitable location for storage and protection of materials at no additional cost to Ecology.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 DEFINITIONS**

- A. Remove: Remove and legally dispose of these items except those indicated to be reinstalled or salvaged.
- B. Remove and Salvage: Items shall remain the Property Owner's or Tenants' property. Carefully remove items and locate them as directed by the Ecology Representative to protect against damage. If packed or crated, identify contents of containers.
- C. Remove and Reinstall: Unless identified in one of the other categories by the Project Manual Contractor shall assume that all movable items and site

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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features in the Project Site shall be Remove and Reinstall. Contractor shall carefully remove items; clean, service, and otherwise prepare them for reuse; store and protect against damage; and reinstall items in the same locations and configurations as their pre-construction condition or in locations indicated.

- D. Remain In Place: Protect in place and leave undisturbed items designated Remain in Place during construction against damage and soiling, including during selective demolition and earthwork activities.
1. If authorized by Ecology in writing, items to Remain In Place may be moved or removed by Contractor to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations and configurations.
    - a. This shall be done at no additional cost to Ecology and with Contractor assuming all risks associated with loss or damage.
  2. All single-family residential buildings and other large, permanent buildings (i.e. garages, large shops on concrete slabs, etc.) shall be considered Remain In Place by Contractor, unless otherwise indicated in the Project Manual.
    - a. Typically, and unless otherwise indicated herein, the following shall be assumed to Remain in Place: concrete slabs-on-grade, asphalt or concrete driveways, public service utilities, and utility poles.
- E. Remove and Replace In Kind: Definition generally applies only to earthwork material and vegetation at the Project Site. Contractor shall remove existing materials and vegetation during clearing activities and legally dispose of offsite. During restoration, Contractor shall replace material or plant young or juvenile replacement vegetation according to its identification and variety.

**1.04 MATERIALS OWNERSHIP**

- A. Except for items or materials indicated to be salvaged, reinstalled, or otherwise indicated to remain the property of Ecology, Property Owner or Tenant, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at the Contractor's option, provided disposal is legal.
1. While onsite, demolished materials shall be maintained in a neat and tidy manner.
  2. Contractor is not permitted to burn demolished materials.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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- B. Contractor shall promptly dispose of demolished materials, unless otherwise indicated. Contractor shall obtain all permits for transport and disposal of demolition debris and materials as required.
  - 1. Comply with hauling and disposal regulations of authorities having jurisdiction.
  - 2. Do not allow demolished materials to accumulate at the Project Site.

**1.05 SUBMITTALS**

- A. If requested by Ecology, Contractor shall submit a schedule of selective demolition activities compatible with the Construction Project Schedule indicating the following:
  - 1. Detailed sequence of selective demolition and removal work at each Property in the Project Site, with starting and ending dates for each activity, to ensure uninterrupted progress of Contractor's onsite operations.
  - 2. Interruption of utility services, if necessary.
  - 3. Coordination for shutoff, capping, and continuation of utility services, if necessary.
- B. Prior to each pay application or as requested by Ecology, Contractor shall submit landfill records indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 PREPARATION PROCEDURES**

- A. Verify that active utilities have been located, disconnected, and capped.
- B. Survey and assess existing conditions and correlate with requirements indicated to determine extents of selective demolition, removal, disposal, cleaning, and/or storage required.
- C. Verify the inventory, locations and configurations, and record the conditions of items to be removed and reinstalled and items to be removed and salvaged.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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- D. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to Ecology accompanying a RFI.
- E. Survey the condition of buildings and other structures at each Property to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- F. Perform surveys as the Work progresses to detect and resolve hazards resulting from selective demolition activities.

**3.02 UTILITY SERVICES**

- A. Maintain existing private utilities indicated to remain in service and protect them against damage during selective demolition operations. Maintain existing public utilities in service during Work, unless otherwise authorized by Ecology.
- B. Do not interrupt existing public utilities serving occupied or operating buildings and facilities, except when authorized in writing by Ecology and authorities having jurisdiction.
  - 1. If interruption is required, limit service disconnection to less than four (4) hours or provide temporary services
  - 2. Temporary services during interruptions to existing utilities shall be as acceptable to Ecology and to governing authorities.
- C. Locate, identify, disconnect, and seal or cap off indicated utility services serving areas to be selectively demolished, if appropriate.
  - 1. Arrange to shut off indicated utilities with utility companies.
  - 2. Where utility services are required to be removed, relocated, or abandoned, provide bypass connections to maintain continuity of service to other parts of buildings or other facilities before proceeding with selective demolition.

**3.03 SELECTIVE DEMOLITION GENERAL PROCEDURES**

- A. Conduct demolition operations and remove debris and materials to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used buildings and facilities.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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- B. Do not close or obstruct streets, driveways, walks, parking lot areas or other adjacent occupied or used facilities except as specified herein without permission from Ecology and authorities having jurisdiction.
  - 1. Provide alternate routes around closed or obstructed traffic ways.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area. When applicable, provide the following.
  - 1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
  - 2. Protect existing site improvements, appurtenances, and landscaping to Remain in Place.
  - 3. Provide temporary weather protection on exterior surfaces and new construction to ensure that no water leakage or damage occurs to structures or interior areas.
- D. Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of buildings or other structures to be selectively demolished.
  - 1. Strengthen or add new supports when required during the Work, including but not limited to the period of selective demolition.
- E. Demolish and remove existing construction only to the extent required for the Work as indicated in the Project Manual. Use methods required to complete Work within limitations of governing regulations and as follows:
  - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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- operations. Maintain portable fire suppression devices during flame-cutting operations.
4. Maintain adequate ventilation when using cutting torches.
  5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly, but legally, dispose of offsite.
  6. Dispose of demolished items and materials promptly. Onsite sale of removed items is prohibited.
- F. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction, structure, or site developments to remain, using power-driven masonry saw or hand tools; do not use power-driven impact tools.
- G. Break up and remove concrete slabs on grade and sidewalks identified for removal in accordance with **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- H. Upon completion of earthwork and the restoration of each Property, return all elements of site improvements, features and construction surfaces identified to remain or be restored to condition existing before start of selective demolition operations.

**3.04 POLLUTION CONTROL**

- A. Contractor shall provide services for effective air, noise and water pollution controls as required by local authorities having jurisdiction and as required by the NPDES and Contractor's SWPPP.
- B. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and soil.
  1. Comply with governing environmental protection regulations.
  2. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
- C. Remove and transport debris in a manner that shall prevent spillage on adjacent surfaces and areas.
- D. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.

**DIVISION 02 – EXISTING CONDITIONS**  
**SECTION 02 41 13 – SELECTIVE SITE DEMOLITION**

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1. Return adjacent areas to condition existing before start of selective demolition as soon as practicable.

**3.05 REPAIR OF DAMAGE FROM SELECTIVE DEMOLITION**

- A. Contractor shall remove, replace, patch, and repair existing materials and surfaces cut, marred or damaged during selective demolition. Such materials and surface shall be repaired or restored to their condition prior to the damage. This repair or restoration work shall be done at no additional cost to Ecology, and by methods and with materials so as not to void existing warranties.
1. Repair materials shall be identical to existing materials unless otherwise authorized by Ecology.
  2. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  3. Use materials whose installed performance equals or surpasses that of existing materials.

END OF SECTION

**DIVISION 02 – EXISTING CONDITIONS**

**SECTION 02 61 13 – EXCAVATION AND HANDLING OF CONTAMINATED SOIL**

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**PART 1 - GENERAL**

**1.01 SUMMARY OF CONTAMINATION**

- A. The soil to be removed from each Property in the Project Site is contaminated with elevated levels of arsenic (typically from inorganic arsenic compounds).
- B. The contamination source was primarily smoke stack emissions from the Everett Smelter facility, which released arsenic during its operation between 1894 and 1912. Arsenic compounds airborne in the emissions settled onto properties in the vicinity of the Smelter property. Subsequent development of the Everett area disturbed and otherwise moved contaminated soil, causing uneven distributions of contamination throughout the Project Site.
- C. Excavation depths specified in ***DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION*** were developed based on sampling performed previously for each Property by Ecology. The specified depths represent the depths of existing soil to be removed in order to remediate each Property.
- D. Arsenic concentrations observed in samples taken in each Property demonstrated substantial variation. The highest concentrations indicated for Properties in the Project Site ranged up to 187 ppm.
- E. Typically, where deeper soils indicated the need to be removed, Ecology did not test concentrations in shallower soils in individual Properties. However, the results from the large number of samples collected and tested for each Property and the locations of the Properties adjacent to each other support the median range in concentrations described here. Pre-construction soil sampling data is presented in Appendix C.
- F. Ecology is not aware of other identified sources of contamination in the Project Site. Contractor shall promptly contact Ecology if evidence of additional contamination is encountered during Work.

**DIVISION 02 – EXISTING CONDITIONS**

**SECTION 02 61 13 – EXCAVATION AND HANDLING OF CONTAMINATED SOIL**

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**1.02 SUBMITTALS**

- A. Prior to commencing excavation activities for the Work, Contractor shall submit to Ecology one (1) or more disposal facilities permitted to receive and dispose of the contaminated soil from this project.
  - 1. Ecology must approve of all disposal facilities used by Contractor in advance of use by the Contractor.
  - 2. Disposal facilities submitted by the Contractor shall be capable of receiving contaminated soil from the Project Site at the rate it is generated by the Work. No adjustments to Contract Time or Contract Sum will be considered by Ecology based on delays caused by limits to received volumes by disposal facilities.
  
- B. Subsequent to commencing excavation, the Contractor may submit substitutions or additional options for disposal facilities.
  - 1. Substitutions shall be submitted in writing in accordance with **SECTION 01 25 00 – SUBSTITUTION PROCEDURES**.
  - 2. No adjustments to Contract Sum or Time will be permitted by Ecology for substitutions or additional options for disposal facilities.
  
- C. A Project and Work Site-specific health and safety plan shall be submitted to Ecology for review and approval, as specified in **SECTION 01 35 29 – HEALTH, SAFETY AND EMERGENCY REQUIREMENTS** of the Project Manual.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 ADDITIONAL EXCAVATION PROCEDURES AND REQUIREMENTS**

- A. This Section provides additional procedures and requirements specific to the excavation and handling of contaminated soil. General Specifications and requirements for excavation Work at the Project Site are contained in **SECTION 31 23 16 – EXCAVATION**.
  
- B. Contractor shall conform to all applicable requirements for excavation and soil handling in Chapter 296-848 WAC and specified in **SECTION 01 35 29 – HEALTH, SAFETY AND EMERGENCY REQUIREMENTS**.

## **DIVISION 02 – EXISTING CONDITIONS**

### **SECTION 02 61 13 – EXCAVATION AND HANDLING OF CONTAMINATED SOIL**

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- C. Pursuant to Chapter 296-848 WAC, all excavation and contaminated soil handling and transportation shall be performed by the Contractor to minimize physical and chemical hazards to Contractor personnel, representatives of Ecology, Property Owner(s), Tenant(s) and the public. This shall include, but not be limited to:
1. Contractor shall perform Work to prevent the airborne dust health risk. This shall include all air monitoring necessary in order to demonstrate to Ecology that the health risk has been completely controlled and prevented.
  2. Contractor shall not permit airborne dust to rise to a level where respirators are required.
  3. Contractor shall provide all appropriate health & safety training to Contractor personnel regarding the presence of soil contamination, including procedures for cleaning both themselves and their clothing and equipment during and after Work.
  4. The Contractor's site-specific Health and Safety Plan shall include reference to the presence of arsenic contamination in the soil in the Project Site, including procedures for minimizing exposure and first aid methods.
- D. Contractor shall maintain a clean Project Site and areas surrounding the Project Site in accordance with **SECTION 01 74 00 – CLEANING AND WASTE MANAGEMENT**. Erosion and sediment control measures shall be implemented by the Contractor in accordance with **SECTION 01 57 13 – TEMPORARY EROSION AND SEDIMENT CONTROL**.
- E. Until removed from the Project Site for safe and legal disposal, excavated contaminated soil shall be confined to fenced areas of Work. Fencing shall be secured to prevent public access to exposed contaminated soil.
- F. Until removed from the Project Site for safe and legal disposal, stockpiles of contaminated soil shall be covered when Work is not being performed to prevent erosion.
- G. Contractor shall include all costs for excavation and handling contaminated soil, including excavation by both mechanical means and by hand-tools, in the Contract Sum. Contract Sum shall also include all costs for protecting stockpiles and cleaning activities during loading and transportation of contaminated soil.

**DIVISION 02 – EXISTING CONDITIONS**

**SECTION 02 61 13 – EXCAVATION AND HANDLING OF CONTAMINATED SOIL**

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**3.02 TRANSPORTATION AND DISPOSAL OF CONTAMINATED SOIL**

- A. Contractor shall transport and dispose of contaminated soil in accordance with local, state and federal laws and regulations having jurisdiction.
- B. As arsenic contamination in soils to be removed from the Project Site are expected to be less than 100 ppm, disposal facilities shall be a Subtitle D landfill permitted to accept waste soil.
- C. All costs for transportation and disposal at the receiving disposal facility, including trucking cost, fuel, fees, taxes, etc. shall be included in the Contract Sum.
- D. No adjustments to Contract Sum based on changes in costs for transportation and disposal at the receiving disposal facility will be approved by Ecology during Contract Time.

END OF SECTION

**DIVISION 03 – CONCRETE**  
**SECTION 03 30 00 – CAST-IN-PLACE CONCRETE**

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**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. This Section specifies cast-in place concrete, including formwork, reinforcing, mix design, placement procedures and finishes. This Section applies to the following:
1. Exterior concrete slabs and driveways, as well as repairs to these features.
  2. Concrete foundations for fence posts.
  3. Sidewalk and sidewalk repairs.
  4. Concrete stairs.
- B. This Section shall also specify the repair of cracks in existing concrete slabs-on-grade to remain at the Project Site.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 CITY OF EVERETT SPECIFICATIONS**

1. All cast-in place concrete work shall be completed according to the specifications and drawings in the City of Everett's "Design and Construction Standards and Specifications for Development."

**PART 2 – PRODUCTS (NOT USED)**

**PART 3 – EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 31 – EARTHWORK**  
**SECTION 31 11 00 – CLEARING AND GRUBBING**

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**PART 1 - GENERAL**

**1.01 GENERAL**

- A. Clearing and grubbing shall be performed in all areas identified in the Project Site for excavation of contaminated soil. Clearing and grubbing shall include, but not be limited to, the following.
1. Removal of existing surfaces, including lawn, gravel, and landscape areas in areas specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
  2. Removing trees, shrubs, and vegetation, unless designated to Remain In Place in accordance with **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
    - a. Removal shall include stumps and root masses, as appropriate for the depths of excavation specified for each Property.
  3. Removal of all landscaping features, areas of brick and paving stone paving and other site features as indicated in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- B. Contractor shall verify all limits of clearing, grubbing, tree removal, landscaping, and site improvement removal with Ecology’s Representative prior to commencing Work.
- C. Prior to commencing clearing and grubbing activities on each Property, Contractor shall verify all surveyed area elevation control points and elevation control marks are established for the Property as specified in **SECTION 02 21 13 – SURVEYS**.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 QUALITY ASSURANCE**

- A. Contractor shall comply with applicable provisions of the following standard specifications and documents:
1. WSDOT Standard Specifications Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Standard Specifications).

**DIVISION 31 – EARTHWORK**  
**SECTION 31 11 00 – CLEARING AND GRUBBING**

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2. City of Everett Construction Standards.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 CLEARING AND GRUBBING PROCEDURE**

- A. Locate and clearly identify all existing utilities in accordance with **SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**, including all underground utilities on the Project Site and adjacent City rights-of-way..
  1. Contractor shall contact the Snohomish County PUD a minimum of two (2) full business days in advance of Work on any Property where an aboveground utility pole or buried Snohomish County PUD utility line is located.
  2. Contractor shall contact the gas company (Puget Sound Energy) and schedule an inspector to be onsite during any clearing activities in the vicinity of natural gas lines.
  3. Contractor shall verify the presence and approximate alignments of private utilities based upon information provided in the Project Manual, information provided by the Ecology Representative, and visible site features (i.e. conduits, sprinkler heads, control boxes, etc.)
    - a. Contractor shall verify and document existing functionality of private utilities with Ecology Representative, prior to construction.
    - b. Contractor shall document private utilities both prior to and during Work in order to restore these utilities to existing conditions during Work.
  4. Repair and restoration to functional service of all utilities, both public and private, made inoperable by the Work or during the Work shall be the responsibility of the Contractor at no additional cost to Ecology.
    - a. Contractor shall verify functionality of private utilities with Ecology Representative.
- B. Verify buildings, site features, improvements, trees and vegetation that are specified to Remain In Place are protected and prominently marked.
- C. Completely remove all vegetation and all other organic debris within the clearing limits as indicated.

**DIVISION 31 – EARTHWORK**  
**SECTION 31 11 00 – CLEARING AND GRUBBING**

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1. Perform removal operations in a manner to protect property.
- D. Only when such roots are associated with trees and stumps removed during clearing activities, Contractor shall remove roots within the prescribed excavation depth.
1. Roots larger than two (2) inches in diameter associated with trees indicated to Remain In Place shall be protected by Contractor during clearing activities.
- E. Contractor shall identify all utilities encountered during clearing, excavation, and all other Work performed for the Project.
1. Document utility conditions, layout, and configuration, identifying any damage experienced prior to and/or during the Work
  2. Identification should include the materials and the location and alignment of those utilities.
  3. The Contractor shall notify the Ecology Representative immediately if underground utilities not shown in Contract Documents are encountered.
- F. Contractor shall be prepared to Replace In Kind all utilities, or portions thereof, that are damaged or destroyed during the Work, unless otherwise specified herein or directed in writing by Ecology.
- G. Contractor shall employ all appropriate measures to control dust both within the Project Site and the surrounding properties and areas.
1. Sprinkle exposed subsurfaces as necessary to limit dust to lowest practicable level. Do not use water to extent causing flooding, contaminated runoff or icing.
- H. Following Unit Prices may apply and shall be used to adjust the contract value in the event of additions and/or deductions to the scope of work:
1. Tree Removal (designated UB-3 in Contract):

**DIVISION 31 – EARTHWORK**  
**SECTION 31 11 00 – CLEARING AND GRUBBING**

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- a. This unit price is for the increase or decrease of the removal of trees or stumps with trunk diameters greater than twelve (12) inches measured four (4) vertical feet from existing ground surface where the decision for or against removal is changed from the requirements in the Contract Documents. This unit price shall include all costs, except overhead and profit and state sales tax, for removal of tree, stump and root ball, handling of tree and stump removal waste while on-site, grinding down exposed roots to prevent regrowth, backfilling holes created by tree or stump removal, trucking of tree and stump removal waste, and legal disposal of waste.
- b. Unit of measurement: On a per-tree, each, lump sum basis.

**3.02 STUMP REMOVAL PROCEDURE**

- A. Completely remove all stumps and associated roots within the clearing limits as indicated. Perform removal operations in a manner to protect property.
  1. Stump and root removal shall be performed in such a fashion as to not disturb adjacent structures and pavements.
  2. Where stumps or associated root systems are immediately close to or beneath existing structures, buildings, and site features specified to Remain In Place, Contractor shall remove as much of the stump and root system as possible without damaging those structures, buildings, and site features.
  3. Structures, buildings, and site features specified to Remain In Place that are damaged by Contractor during removal of stumps or roots shall be repaired or replaced by Contractor at no additional cost to Ecology.
- B. Excavate and remove all stumps to a minimum depth of two (2) feet, except stumps specified to Remain In Place.
- C. Contractor shall grind down or otherwise remove exposed roots larger than two (2) inches in diameter to prevent regrowth.
  1. Roots larger than two (2) inches in diameter associated with trees indicated to Remain In Place shall be protected by Contractor during clearing activities.
- D. Backfill holes created during stump removal with common fill to the specified excavation depth then proceed with specified restoration.

**DIVISION 31 – EARTHWORK**  
**SECTION 31 11 00 – CLEARING AND GRUBBING**

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**3.03 REMOVAL OF SITE FEATURES**

- A. Removal of structures, landscaping, brick and stone paver pavements and other site improvements and features shall be performed in accordance with **SECTION 02 41 13 – SELECTIVE SITE DEMOLITION.**

**3.04 DISPOSAL OF MATERIALS**

- A. Refuse and debris from clearing shall be disposed of by the Contractor in a manner consistent with government regulations having jurisdiction. In no case shall refuse material be left on the Project Site, placed onto abutting private properties, or buried in pits, embankments or trenches on the Project Site. While material is on site, maintain material in a neat and tidy manner.
- B. Refuse and debris shall not be deposited in a stream or body of water or any public right-of-way. Refuse and debris shall not be deposited upon private property except by written consent of both Ecology and property owner.
- C. Onsite burning is not allowed.
- D. Contractor shall maintain hauling routes clean and free of debris resulting from Work at no additional cost to Ecology.

END OF SECTION

**DIVISION 31 – EARTHWORK**  
**SECTION 31 23 16 – EXCAVATION**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for the following:
  - 1. Removal of native soil to the Property specific Decision Unit depths and offsite disposal.
  - 2. Removal and disposal of imported backfill allowed through moisture or other conditions to become unsuitable.
  
- B. The Work described in this Section shall incorporate and conform to the requirements in **SECTION 02 61 13 – EXCAVATION AND HANDLING OF CONTAMINATED SOIL**.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 QUANTITY MEASUREMENT AND CONTRACT SUM**

- A. Contractor shall include in the Contract Sum the cost of achieving all excavated grades during Work at the Project Site.
  
- B. All excavation to specified depths, export, and disposal, as indicated in the Contract Documents, shall be included in the Contract Sum.
  - 1. If the Contractors sequencing of the Work requires stockpiling and double handling of materials, this shall be accomplished within the Contract Sum amount at no additional cost to Ecology.
  
- C. Unit Prices in the Contract represent prices for calculated additions and/or deductions to the Contract Sum:
  - 1. Excavation and Offsite Disposal (designated UB-1 in Project Manual):
    - a. This unit price is for quantities of excavation, removal, haul, and disposal of contaminated soil that are increased and/or decreased from the basis of bid quantities described for the Work in the Project Manual.
    - b. This unit price shall include all costs, except overhead, profit, and state sales tax, for loading, trucking/haul, and disposal at a permitted disposal site.

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- c. Unit of measurement: In-place cubic yard (CY) volume, as calculated by horizontal field measurement of the area of added/deducted excavation multiplied by the field measurement of depth excavated. Truck weigh tickets shall not serve as an alternate basis for measurement, but shall be used as evidence of disposal at the permitted disposal site.
- 2. The Ecology Representative shall measure dimensions for application of this Unit Price in the field on behalf of Ecology for quality assurance purposes and to provide Ecology documentation for Change Orders. Contractor shall be responsible for collecting measurements of dimensions applicable to the use of this Unit Price for Contractor use of Unit Price.
- D. If the full estimated quantity of excavation as indicated in the Project Manual is not required due to the presence of trees, shrubs, structures or other constraints on the Contractor reaching the full excavation depths indicated in the Project Manual, the Contractor shall credit back to Ecology the value of the unrequired excavation at the stated unit price, with limitations on the applications of the unit price, as directed by Ecology. The Contract Sum shall be reduced by Change Order accordingly.
- E. The Contractor shall be responsible for all unauthorized excavation of additional soil and/or placement of additional fill. The Unit Prices shall not be applied to unauthorized excavation. An adjustment to either Contract Sum or Contract Time based on all such unauthorized Work will not be approved.

**1.04 QUALITY ASSURANCE**

- A. Contractor shall comply with applicable provisions of the following standard specifications and documents:
  - 1. WSDOT Standard Specifications Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Standard Specifications).
  - 2. City of Everett Construction Standards.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Stockpile materials on site within clearing limits and at locations approved by Ecology. The Contractor shall be responsible for protecting the stockpiled material.

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- B. Contractor shall prevent unprotected physical contact between contaminated soil and uncontaminated materials, equipment and surfaces. This shall include imported fill materials.
- C. Direct surface water away from stockpile site so as to prevent erosion or deterioration of materials.
- D. When removing stockpile, leave area in a clean and neat condition. Grade site surface to prevent free-standing surface water.
- E. Maintain toe of stockpiled material at least six (6) feet from edges of trenches and excavations. Pile so surface water is prevented from flowing into excavations. Provide free access to fire hydrants, water valves, meters; private driveways; and leave clearance to enable the free flow of storm water in gutters, conduits, and natural water courses.

**1.06 DIMENSIONS AND LAYOUTS**

- A. The Contractor shall be responsible for furnishing, setting and marking all line and location stakes, including offsets and general construction staking. When Work requiring control is being performed, all necessary related equipment, supplies and instruments shall be on site and in use by Contractor. A qualified layout engineer, surveyor, or technical specialist must be assigned to the Contractor's crew for this Work. This equipment and personnel must be available, at no additional cost to Ecology, for the purpose of verifying layout, conformance of grading, and certifying the accuracy of Work on the Project Site.
- B. The Contractor shall be responsible for preserving all benchmarks and stakes and the replacement of any that are displaced or missing.
- C. The Contractor shall be responsible for review of all utility purveyor, and City, County or State records relative to the existing underground utilities. The Contractor shall be responsible for avoiding damage to these facilities and shall repair any damage resulting from contractor's work to any located and marked utilities at no additional cost to Ecology.
- D. Contractor shall identify all utilities encountered during clearing, excavation, and all other Work performed for the Project.
  - 1. Document utility conditions, layout, and configuration, identifying any damage experienced prior to and/or during the Work

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2. Identification should include the materials and the location and alignment of those utilities.
3. The Contractor shall notify the Ecology Representative immediately if underground utilities not shown in Project Manual, or not located by the utility locate service, are encountered.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 CONTRACTOR PREPARATION AND VERIFICATION OF CONDITIONS**

- A. Before commencing excavation, Contractor shall:
  1. Verify survey benchmark and intended elevations for the Work are as indicated.
  2. Verify erosion and sediment control measures are in place and operating properly.
  3. Required lines, elevation survey locations, levels, contours and datum have been identified and all conflicts have been resolved with Ecology.
  4. Verify all required elevations to be matched as specified in the Project Manual during backfilling before commencing excavation.
- B. Before commencing excavation, Contractor shall verify buildings, site features, improvements, trees and vegetation that are specified to Remain In Place are protected and prominently marked.

**3.02 GENERAL EXCAVATION PROCEDURES**

- A. Excavation shall be performed to the depths indicated for each Decision Unit as indicated in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**, unless otherwise restricted by the preservation of buildings, structures, improvements, and vegetation designated as Remain in Place.
- B. Excavation shall be performed through the use of some combination of mechanical excavation methods and hand-tool methods. The Contractor shall make every effort to coordinate excavation activities such that excavation spoils are handled as little as possible.

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1. Remain In Place features shall be protected from damage during excavation. Excavation methods with hand-tools shall be used in vicinity of vegetation to prevent damage to shallow root masses.
- C. Excavations shall be sloped a minimum of 1(horizontal):1(vertical) away from the base of all building and structure foundations, and away from the edge of all sidewalks, concrete slabs-on-grade, concrete or asphalt driveways, the toe of rock slopes and rockeries to be left in place, and all other structures and site features that may otherwise be disturbed by excavation activities.
1. Contractor shall protect and monitor all excavation slopes for erosion or instability, and correct deficiencies promptly at no additional cost to Ecology.
- D. Excavation shall be performed in such a fashion as to avoid damage to buried utilities, including the use of hand-tools when over or in the close vicinity of buried utilities.
1. Where necessary to expose existing utilities, Contractor shall expose utilities without damage, removing as much soil from around those utility lines as possible.
  2. Excavation shall not be permitted below buried utility pipes and support bedding for utilities shall not be removed.
  3. Damage to utility lines shall be repaired promptly and service restored, at no additional cost to Ecology.
- E. Excavation deeper than six (6) inches shall not be permitted within two (2) feet of any aboveground utility pole or anchor foundation for an aboveground utility pole. Beyond two (2) feet, the excavation shall be sloped at a minimum of 1(horizontal):1(vertical) away from pole base or anchor.
- F. Roots larger than two (2) inches in diameter associated with trees and scrubs specified to Remain In Place shall be protected by Contractor during excavation.
- G. Contractor shall identify all utilities damaged or destroyed during clearing, excavation and all other Work performed for the Project. Identification shall include the materials and the alignment of those utilities. Contractor shall be prepared to replace, repair, and restore to service all utilities damaged or destroyed during Work, unless otherwise specified herein or directed in writing by Ecology.

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- H. Excavated soil shall be stockpiled and removed from each Property for legal disposal offsite. Stockpiles shall be covered when not in use to prevent erosion by wind or water.
- I. Contractor shall employ all appropriate measures to control dust both within the Project Site and the surrounding properties and areas.
  - 1. Moisten excavated material and exposed subsurfaces as necessary to limit dust to lowest practicable level. Do not use water to extent causing flooding, contaminated runoff, or icing.

**3.03 EXCAVATION PROCEDURES NEAR MATURE TREES AND PLANTS**

- A. For Trees: Excavation of soil shall be limited by the roots of the trees to Remain In Place. Ecology, in cooperation with local arborists, has developed the following method for soil removal and restoration that minimizes the damage to tree roots and helps preserve the life of the tree. This method represents an effective balance between removing as much potentially contaminated soil as possible while minimizing the risk that a mature tree will either die or be blown over in a high wind during the Work or after the Work is completed.
  - 1. Measure the tree diameter approximately four (4) feet from the ground. That diameter in inches represents the critical root zone (CRZ), in feet.
    - a. For example, if the tree is twenty-four (24) inches in diameter, the CRZ extends twenty-four (24) feet from the trunk of the tree.
  - 2. The CRZ is divided in half into the Outer CRZ and the Inner CRZ. The dividing point is measured from the trunk of the tree to half of the CRZ distance.
    - a. From the previous example, the 24 inch diameter tree would have an Inner CRZ that extends twelve (12) feet from the trunk of the tree and an Outer CRZ that extends an additional twelve (12) feet from the edge of the Inner CRZ. Figure 2 In Appendix D provides an illustration of this example.
  - 3. Within the Outer CRZ, careful excavation shall be performed by the Contractor to avoid damaging roots, particularly those larger than two (2) inches in diameter.
    - a. Ecology may request that the Contractor use hand tools (e.g., shovels, air spades, etc.) for excavation in the Outer CRZ.

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- b. If a root greater than two (2) inches in diameter is encountered, the Contractor must not excavate closer to the base of the tree from that direction. The Contractor may continue excavating from a different direction.
- c. Unless otherwise specified, surface restoration in the Outer CRZ shall match the surrounding areas.
- 4. Within the Inner CRZ, the Contractor shall only remove sod or other surfacing materials if it is possible to do so without exposing or damaging roots.
  - a. Unless otherwise specified, surface restoration in the Inner CRZ will be topsoil and landscape bark.
- B. For Plants: Excavation of soil shall be limited by the roots of the plants to Remain In Place. Trees and plants that do not have a single trunk or that have a trunk diameter smaller than 6” shall have excavation limited to the tree or plant drip line to minimize the damage to roots and help preserve the life of the plant.
- C. If the tree or plant is within a landscape bed where bark is specified, the Contractor shall also restore the area within the tree or plant dripline with landscape bark.

**3.04 EXCAVATIONS OF EXISTING SLOPES**

- A. Excavation into existing slopes shall be terraced and benched, with no horizontal bench surface less than two (2) feet in width for every vertical cut of two (2) feet. Bench shall be level in all directions.
- B. Vertical cuts for terracing shall be no higher than two (2) feet.

**3.05 SITE TOLERANCES**

- A. Finish excavation grades shall match contours and elevations established by pre-excavation surveys performed by the Contractor minus the required excavation depth (e.g., 12 inches) to within one (1) inch or less.

**3.06 PROTECTION**

- A. The Contractor shall reduce disturbance to exposed soil by the following methods:
  - 1. Limit construction traffic over unprotected soil.

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2. Provide gravel “working mats”
  3. Sloping excavated surfaces to promote runoff.
  4. Sealing exposed surfaces by rolling with a smooth drum compactor or rubber tired roller at the end of each working day and removing wet surface soil prior to filling each day.
- B. If earthwork is to be performed in wet weather or under wet conditions when control of soil moisture content is not possible, the following recommendations shall be followed:
1. Earthwork should be performed in small areas to minimize exposure to wet weather. At times when heavy rain is likely to be encountered, the work shall be sequenced so that only as much area as can be covered and protected are exposed.
    - a. Protect exposed soils from wet conditions by covering or otherwise stabilizing the soil.
  2. The size and type of construction equipment used may have to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to perform earthwork with a backhoe or hand-tools to minimize subgrade disturbance caused by equipment traffic.
  3. The ground surface within the construction area should be graded to promote runoff of surface water and to prevent the ponding of water (i.e., more than half an inch of standing water).
  4. The ground surface within the construction area should be sealed by a smooth drum vibratory roller, or equivalent, and under no circumstances should be left uncompacted and exposed to moisture. Soils which become too wet for compaction should be removed and replaced at no additional cost to Ecology.
  5. Excavation shall be observed by an Ecology Representative to verify that all unsuitable materials are removed and suitable compaction and site drainage equivalent or better than pre-construction is achieved.
  6. Erosion control measures shall be strategically located as necessary to control surface water, including during storm events, and prevent erosion.

**3.07 CLEANING**

- A. Dispose of waste, surplus, and unsuitable materials according to laws, regulations, and ordinances offsite at no additional cost to Ecology.

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- B. Contractor shall maintain hauling routes clean and free of debris resulting from Work of this Section at no additional cost to Ecology.
- C. Contractor shall minimize contact between contaminated soil and uncontaminated areas, materials and equipment. Areas of contact shall be promptly cleaned and all contaminated soil removed.

**3.08 EXCAVATION SOIL SAMPLES**

- A. Once excavation of an individual Property decision unit is complete, Contractor shall notify Ecology and allow Ecology to sample and test the soil at the excavation limit prior to proceeding with installation of geotextile and backfill.
  - 1. Ecology shall notify Contractor of sample results.
    - a. If results are acceptable, Contractor shall proceed in accordance with the Contract Documents.
    - b. If results indicate further excavation is required, Contractor shall proceed as directed by Ecology through a Work Change Directive.
  - 2. Contractor shall allow up to forty-eight (48) hours for Ecology to sample and test at no additional cost to Ecology or impact to Contract Time.

END OF SECTION

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**SECTION 31 23 23 – FILL**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for the following:
1. Repair and/or installation of public and private utilities removed, destroyed or damaged during Work.
  2. Placement of geotextile fabric over exposed soil prior to placement of imported backfill.
  3. Unless specified otherwise, placement and compaction of imported backfill (“Common Fill”) and surfacing materials such as topsoil, gravel, or replacement landscape bed materials at each Property to restore the existing, pre-construction elevations and topography surveyed by Contractor.
  4. Unless specified otherwise, placement of materials to return surface to pre-construction elevations next to permanent site features previously surveyed by Contractor.
  5. Placement and compaction of imported backfill on slopes; behind walls and in areas to receive concrete slabs, driveways or sidewalks; and areas to receive aggregate surfacing.
  6. Removal and disposal of imported backfill allowed through moisture or other conditions to become unsuitable.
  7. Placement of topsoil and finish grading for areas of sod, tree, shrub, and vegetation planting and landscape restoration.
  8. Placement of replacement landscaped area surface materials.

**1.02 RELATED SECTIONS**

- A. Section 31 23 16 – Excavation  
B. Section 32 15 00 – Aggregate Surfacing  
C. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTALS**

- A. Material samples: Submit sample of sufficient size to allow for confirmation testing for each material a minimum of ten (10) business days prior to the use of material, unless otherwise indicated. Ecology may conduct independent material testing as specified in this Section as necessary.
1. Samples of topsoil and compost shall be submitted separately.

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2. Where multiple sources for materials are to be used for the Work, one sample shall be submitted for each source.
- B. Test Reports:
1. Sieve analysis for each material.
  2. Plasticity Index for Common Fill.
  3. Tests of topsoil and compost as specified in this Section. Test reports shall include, but not be limited to:
    - a. pH.
    - b. Carbon-Nitrogen ratio.
    - c. Trace minerals.
    - d. Solvita.
    - e. Conductivity.
    - f. PFRP certification.
    - g. Recommendations for amendments by Contractor.
  4. Documentation demonstrating that all clean soil materials have no concentrations of any contaminating and/or hazardous substance exceeding MTCA Method B standards. Substances include, but are not limited to:
    - a. SVOCs (per EPA 8270C)
    - b. VOCs (per 8260B)
    - c. PCBs (per EPA 8082)
    - d. Chlorinated Pesticides (per EPA 8081A)
    - e. Metals per EPA 6020 (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, zinc)
    - f. Cyanide (per EPA 9012)
    - g. Mercury (per EPA 7471)
  5. Where multiple sources for materials shall be used for the Work, a complete set of test reports shall be submitted for each source.

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- C. Sod supplier certification of topsoil suitability.
- D. WSDOT pit certification for each pit source of material.
- E. Separation Geotextile Fabric product literature, manufacture's storage, handling, and installation instructions, and material sample not less than six (6) inches square and accessory items and fasteners.
- F. Weed Control Fabric product literature, manufacture's storage, handling, and installation instructions, and material sample not less than six (6) inches square and accessory items and fasteners.
- G. Certified waybills, delivery tickets and bills of lading: In accordance with provisions of this Section within one week of each delivery.
  - 1. Provide certified waybills, delivery tickets and bills of lading paperwork to Ecology on a weekly basis.
  - 2. Documentation shall contain the following information, complete and accurately recorded:
    - a. Date and the time that the material entered or departed the Project Site.
    - b. Driver identification.
    - c. Vehicle identification, configuration, tare weight.
    - d. Material classification.
    - e. Material weight in tons or volume in cubic yards.

**1.04 QUANTITY MEASUREMENT AND CONTRACT SUM**

- A. Contractor shall include in the Contract Sum the cost of achieving all restored final grades and topography present for each property.
- B. All imported soil, including placement and compaction required to achieve the final grades and completed structures as specified in the Project Manual, shall be included in the Contract Sum.
  - 1. If the Contractor's sequencing of the Work requires stockpiling and double handling of materials, this shall be accomplished within the Contract Sum amount at no additional cost to Ecology.

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- C. Unit Prices in the Contract represent prices for calculations of additions and/or deductions to the Contract Sum:
1. Imported Clean Fill (designated UB-2 in Contract Documents):
    - a. This Unit Price shall be for the increase or decrease of quantities of imported fill where such is required to restore property finish grade to existing conditions.
    - b. This Unit Price shall include all costs for material purchase and transportation to a Project property as well as onsite handling, placement and compaction as specified in the Project Manual.
    - c. Unit of measurement: In-place cubic yard (CY) volume, as calculated by horizontal field measurement of the area of added/deducted excavation to be backfilled multiplied by the field measurement of depth excavated, including changes, if any. Truck tickets shall not serve as an alternate basis for measurement.
  2. The Ecology Representative shall measure dimensions for application of this Unit Price in the field on behalf of Ecology for quality assurance purposes and to provide Ecology documentation for Change Orders. Contractor shall be responsible for collecting measurements of dimensions applicable to the Contractor use of this Unit Price.
- D. If the full assumed quantity of fill Work as indicated in the Project Manual is not required due to the presence of trees, shrubs, structures or other constraints on the Contractor reaching the full excavation depths indicated in the Project Manual, the Contractor shall credit back to Ecology the value of the unrequired fill at the stated Unit Price as directed by Ecology. The Contract Sum shall be reduced by Change Order accordingly.
- E. The Contractor shall be responsible for all unauthorized excavation of additional soil and/or placement of additional fill. The Unit Prices shall not be applied to unauthorized excavation. An adjustment to either Contract Sum or Contract Time based on all such unauthorized Work shall not be permitted.

**1.05 QUALITY ASSURANCE**

- A. Contractor shall comply with applicable provisions of the following standard specifications and documents:

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1. WSDOT Standard Specifications Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Standard Specifications).
2. City of Everett Construction Standards.
3. ASTM C136 Standard Method for Sieve Analysis of Fine and Course Aggregate.
4. ASTM D-422 Method for Particle Size Analysis of Soils
5. ASTM D-4318 Liquid Limit, Plastic Limit and Plasticity Index of Soils
6. AASHTO T176 Plastic Fines in Graded Aggregates and Soils by use of the Sand Equivalent Test.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Stockpile materials on site within clearing limits and at locations approved by Ecology. The Contractor shall be responsible for protecting the stockpiled material.
- B. Direct surface water away from stockpile site so as to prevent erosion or deterioration of materials.
- C. When removing stockpile, leave area in a clean and neat condition. Grade site surface to prevent free-standing surface water.
- D. Comply with WSDOT Section 3-02.2(6). Contractor shall provide survey stakes for stockpiles.
- E. Soil integrity will be influenced by the weather conditions and the Contractor's handling and protection of the material as it is removed and placed. It is the sole responsibility of the Contractor to protect material from the elements. Material that is deemed unsuitable due to lack of protection shall be rejected by Ecology. The Contractor shall be responsible for removing such material and replacing with acceptable material or aerated and allowed to dry at no additional cost to Ecology.
- F. Maintain toe of stockpiled material at least 6 feet from edges of trenches and excavations. Pile so surface water is prevented from flowing into excavations. Provide free access to fire hydrants, water valves, meters;

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private driveways; and leave clearance to enable the free flow of storm water in gutters, conduits, and natural water courses.

- G. Contractor shall protect geotextile fabric, and all other materials sensitive to deterioration or destruction, from exposure to sun or weather.

**1.07 WET WEATHER CONDITIONS**

- A. Maintain appropriate drainage in areas of Project Site where placement and compaction of fill is being performed.
- B. Exposed slopes shall be sloped away from existing buildings and other structures.

**1.08 DIMENSIONS AND LAYOUTS**

- A. The Contractor shall be responsible for furnishing, setting and marking all line and location stakes, including offsets and general construction staking. When Work requiring control is being performed, all necessary related equipment, supplies and instruments shall be on site and in use by Contractor. A qualified layout engineer, surveyor, or technical specialist must be assigned to the Contractor's crew for this Work. This equipment and personnel must be available, at no additional cost to Ecology, for the purpose of verifying layout, conformance of grading, and certifying the accuracy of Work on the Project Site.
- B. The Contractor shall be responsible for preserving all benchmarks and stakes and the replacement of any that are displaced or missing.
- C. The Contractor shall be responsible for review of all utility purveyor, and City, County or State records relative to the existing underground utilities. The Contractor shall be responsible for avoiding damage to these facilities and shall restore all utilities at Contractor's own expense.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

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- A. Common Fill: All fill placed for grade restoration, landscaped and vegetated areas to accommodate the required topsoil to restore grades in accordance with the Contract Documents. Contractor shall verify all elevation locations surveyed for each Property prior to placement of topsoil.

1. Common fill shall meet the following requirements.

- a. Common fill shall be granular sand material, either naturally occurring or processed. It shall be essentially free from various types of wood waste or other extraneous, deleterious, or objectionable materials. It shall have such characteristics of size and shape that it shall compact readily.
- b. The maximum particle size shall not exceed six (6) inches. Common fill shall meet following gradation requirements tested in accordance with ASTM D-422:

<u>Sieve Size</u>	<u>Percent Passing</u>
3/4-inch	100
No. 4	80-100
No. 40	0-60
No. 200	max of 7

- c. Common fill shall further meet the following plasticity requirements in accordance with ASTM D-4318: Plasticity Index (PI) <15 and Liquid Limit <40.
- d. Clean soil backfill shall have no concentrations of any contaminating and/or hazardous substance exceeding MTCA Method B standards.

- B. Rock for Rock Slope and Chinking Material: Material shall be hard, sound and durable material, free from seams, cracks, and other defects tending to destroy its resistance to weather and shall be per Section 9.13.7(1) of the WSDOT Standard Specifications.

- C. Topsoil: Topsoil material shall be a uniform mixture by volume of sixty (60) percent sand and forty (40) percent compost mulch of a quality that can support the growth of sod and restored trees, shrubs, and vegetation.

1. Topsoil shall meet the following requirements:

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- a. Organic amendments include weed- and fungus-free compost and manure, aged sawdust and wood shavings, ground bark and peat moss. These organic amendments must be mixed deeply and uniformly prior to the installation of sod. Organic material in topsoil shall have the following physical characteristic:
  - 1) Shall be screened using a sieve no finer than 7/16 inch and no coarser than 3/4 inch.
- b. Topsoil shall have a pH from 6.0 to 7.5.
- c. The sand component shall be a washed sand and meet the following gradation requirements tested in accordance with ASTM-422:

<u>Sieve Size</u>	<u>Percent Passing</u>
No. 4	95-100%
No. 10	75-90%
No. 40	20-40%
No. 100	4-10%
No. 200	0-5%

- d. Compost mulch shall meet the following minimum requirements:
  - 1) Compost shall score a number five (5) or above on the Solvita Compost Maturity Test.
  - 2) Shall have a pH from 6.0 to 7.5.
  - 3) Shall have a maximum electrical conductivity of 4.0 mmhos/cm.
  - 4) Shall have a maximum carbon to nitrogen ratio of 18:1.
  - 5) Shall be certified by the Process to Further Reduce Pathogens (PFRP) guideline for hot composting as established by the United States Environmental Protection Agency.
- 2. Contractor shall obtain written verification from suppliers of sod for the Project that the topsoil material is suited for the sod to be installed.
  - a. If topsoil does not meet the requirements of the sod supplier, Contractor may add either organic or inorganic amendments to the soil to bring it into conformance with supplier requirements. Amendment of unsuitable topsoil by Contractor shall be done at no additional cost to Ecology.
- 3. Topsoil shall have no concentrations of any contaminating and/or hazardous substance exceeding MTCA Method B standards.

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- D. Separation Geotextile Fabric: Geotextile shall be a nonwoven, stable fiber, polypropylene, needle punched product meeting the following requirements:
1. Resistant to UV degradation and to biological and chemical environments normally encountered in soils.
  2. Properties shall conform to the Minimum Average Roll Values (MARV) in the table below.

Property	ASTM Test Method	Unit	Property Requirement
<b>Physical</b>			
Mass/Unit Area	D-5261	oz / yd <sup>2</sup>	3.5
<b>Mechanical</b>			
Tensile Strength (Grab)	D-4632	lbs	50
<b>Hydraulic</b>			
Apparent Opening Size	D-4751	Std Sieve	No. 40 Max
Permittivity	D-4491	sec <sup>-1</sup>	2.0
<b>Endurance</b>			
UV Resistance (500 hrs)	D-4355	% retained	70

3. Acceptable products:
  - a. PermeaTex. Distributor is Northwest Linings & Geotextile Products, Inc. Kent, WA 98032
  - b. GEOTEX® 351. Manufacturer is Propex Operating Company, LLC. Chattanooga, TN 37422
  - c. MIRAFI 135N. Manufacturer is TenCate Geosynthetics, 365 South Holland Drive, Pendergrass, Georgia 30567
  - d. Or Approved Equal.

E. Tracer Tape: Utility pipe tracer tape shall be detectable below ground surface, color coded as indicated below, with utility name printed on tape. Conductive warning tape is required over all sewer, drainage, and domestic water pipe. Tape shall be manufacturer's standard permanent, bright-colored, continuous printed plastic tape, aluminum backed, intended for direct-burial service. Tape shall be not less than six (6) inches wide x four (4) millimeters thick.

1. Domestic Water: Color: Blue; Text: Caution Domestic Water
2. Sewer/Drainage: Color: Green; Text: Caution Sanitary Sewer

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3. Tracer tape is not required for irrigation pipe, unless pipe also services the domestic water for the Property.
- F. Utility pipe materials and fittings: Contractor shall provide all materials to Replace In Kind all public and private utilities damaged, removed, and/or destroyed during Work.
1. Replacement of utilities shall use materials and system configuration that is the same as the pre-construction materials and configuration, unless otherwise specified in the Project Manual or indicated by Ecology in writing.
  2. Contractor shall identify and document all utility materials and utility configuration, and layout encountered during excavation.
- G. Edging materials: Edging materials shall be pre-construction materials or new materials that are the same as pre-construction materials that are specifically designed and intended for confining topsoil and landscape bed surface materials (i.e. mulch, lava rock, etc.) to the dimensions of the landscape bed and keep materials from intruding into lawn or hardscape areas.
1. Contractor shall determine where edging materials exist during Contractor's existing conditions assessment of each Property in accordance with **SECTION 02 22 43 – EXISTING CONDITIONS ASSESSMENTS**.
  2. Edging materials not identified by Contractor during Contractor's existing conditions assessment of each Property, but uncovered during subsequent Work by Contractor shall be documented and restored.
  3. Where present, existing edging materials shall be approached as a feature of landscape beds and/or areas and shall be Removed, Removed and Reinstalled, or Remain In Place as specified for the individual feature.
  4. Contractor shall not replace pre-construction edging materials with alternative new materials different from the pre-construction edging materials unless authorized by Ecology in writing.
- H. Weed control fabric: Weed control fabric shall be a black geotextile fabric suitable for use in landscape beds.
1. Fabric shall be chemical free.
  2. Black plastic sheeting is not acceptable as a weed control fabric.

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3. Fabric manufacture's intended purpose for the product shall be for weed control.
  4. Weed control fabric shall only be installed in landscape beds and areas to replace existing fabric where encountered.
- I. Weed control fabric pins: Pins specifically intended for installation with weed control fabric in landscape applications to assist holding fabric flat and in place.
1. Weed control fabric pins shall be provided by Contractor in sufficient quantity to meet the minimum spacing requirements specified in this Section.
- J. Landscape bark: Weed-free bark mulch suitable for placement in landscape beds and for other exposed soil areas (i.e. beneath tree driplines, etc.).
1. Shall be free of inorganic debris, garbage, etc.
  2. Shall contain no concentrations of any contaminating and/or hazardous substances.
- K. Decorative River Rock: Decorative river rock to match the pre-construction surfacing materials in landscape beds and other decorative areas, or as specified to be placed in areas designated in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
1. Contractor shall reuse existing materials to the maximum extent possible. Reused materials shall be washed before reuse to remove potentially contaminated dust.
  2. Contractor shall confirm sufficient availability and supply of replacement surfacing materials before removing and disposing of existing surfacing materials from each Property during Contractor's existing conditions assessment for each Property.
  3. Contractor shall supply new river rock as necessary to supplement reused material. New river rock shall be:
    - a. Washed river gravel having been naturally deposited by a river or stream.
    - b. Uniform in size.
    - c. Free of organic matter, soil, non-river gravel, and trash.

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- d. Composed of round rocks that may be varied in color.
- e. Originated from the Puget Sound Region of Washington State.
- f. River rock gradation shall meet the following specifications:

<b>SIEVE SIZE</b>	<b>PERCENT PASSING (By Weight)</b>
2-inch	100
½-inch	0

**2.02 SOURCE QUALITY CONTROL**

- A. Where specified in the Project Manual and when requested by Ecology, Contractor shall submit test reports to Ecology demonstrating that materials meet the Specifications in the Project Manual. Coordinate sampling with Ecology Representative.
  - 1. Common fill material shall be sampled and tested a minimum of once (1) per source.
  - 2. Topsoil and compost material shall be sampled and tested once (1) per five-hundred (500) cubic yards per source.
- B. Ecology may request additional testing. Contractor shall be reimbursed for additional testing requested by Ecology, if test results indicate compliance with the Specifications. If tests indicate materials do not meet specified requirements, the Contractor shall change materials and retest at no additional cost to Ecology.

**PART 3 - EXECUTION**

**3.01 CONTRACTOR PREPARATION AND VERIFICATION OF CONDITIONS**

- A. Before commencing backfilling, grading, and compaction, Contractor shall:
  - 1. Verify survey benchmarks and intended elevations for the Work are as indicated, and are available to field personnel and surveyors performing the Work.
  - 2. Verify erosion and sediment control measures are in place and operating properly.
  - 3. Verify the excavation and removal of contaminated soil has been completed to the depths indicated in the Project Manual, unless otherwise indicated.

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4. Verify required lines, elevation survey locations, elevation control points, final elevation marks, levels, contours and datum have been identified and all conflicts have been resolved with Ecology.
  5. Verify all information required to meet grading tolerance Specifications has been provided to field personnel and that appropriate surveying equipment and trained personnel are present to direct Work to the specified tolerances.
  6. Verify horizontal locations of all pre-construction elevations, including all elevation control points and final elevation control marks.
  7. Verify surveying resources to conduct surveying as specified in **SECTION 02 21 13 – SURVEYS** are in order to achieve the tolerances specified in this Section.
- B. Before commencing backfilling, grading, and compaction, Contractor shall verify buildings, site features, improvements, trees and vegetation that are specified to Remain In Place are protected and prominently marked.
- C. Before commencing backfilling, grading, and compaction, Contractor shall verify the subgrade is stable and suitably compacted. If subgrade soils become loosened, disturbed, unstable, or too saturated to perform Work, Contractor shall excavate to expose undisturbed soil. Replacement with properly placed and, if specified, compacted fill shall be required.
- D. Before commencing backfilling, grading, and compaction, Contractor shall verify all site features that have previously been Removed and Replaced In Kind or Removed and Reinstalled as part of the Work are protected and prominently marked.

**3.02 SEPARATION GEOTEXTILE FABRIC**

- A. After completed site excavation and verifying excavation depths by surveying, and before placement of any backfill, the subgrade shall be covered with a separation geotextile fabric. The fabric shall be rolled out evenly and placed to cover the entire excavation surface, including sides. Where necessary to fit around buildings, structures, improvements, slabs, trees and vegetation to Remain In Place, fabric can be cut accordingly. A minimum of six (6) inches of overlap shall be made between different sheets of separation geotextile fabric.
1. Install in accordance with manufacturer recommendations.
  2. Contractor shall minimize traffic over fabric until buried under the first lift of backfill.

**3.03 COMMON FILL GRADING PROCEDURES**

- A. Grade areas adjacent to buildings and structures in a manner that provides positive drainage away from foundations and slabs-on-grade and prevents ponding at the building or structure, itself.
  
- B. Backfill excavated areas of the Project Site with common fill to contours and elevations to accommodate the required topsoil and surfacing materials specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
  - 1. Place lifts of common fill material in continuous layers not exceeding six (6) inches in loose thickness for small, man-sized sleds and similar compactors, or eight (8) to ten (10) inches in loose thickness for heavier compaction equipment.
  - 2. Water settling or jetting shall not be permitted as a means of compaction.
  - 3. All backfill shall have a moisture content within +/- 3% of optimum moisture content as determined by ASTM D698 to achieve adequate compaction.
  - 4. Each lift of fill shall be observed by the Ecology Representative and hand-probed or proof rolled to confirm firm compact condition. Alternatively, observation of compaction activities can be used, provided the firm compaction of the lift of soil can be ascertained.
    - a. Backfill shall be moisture conditioned to an optimum moisture content for proper compaction. If moisture level is above optimum then aerate to dry and reduce moisture. Processes may also include placing thinner lifts and allowing material to dry; blading, turning, and disking material; or other methods approved by Ecology.
  - 5. Where less than the required firm compact condition is indicated by the Ecology Representative, Contractor shall remove and replace the substandard fill or apply additional compactive effort and moisture condition the soil as necessary until a firm compact condition is attained.
  - 6. Do not fill over ponded surface water (i.e., greater than half an inch) or existing subgrade surfaces which are yielding, disturbed, unstable under foot traffic or heavier loads, or softened.

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7. Suspend placing fill when the weather conditions will not allow proper placement and fill compaction, and surface water cannot otherwise be controlled by Contractor.
  8. Surveying of elevation control points and references to final elevation control marks shall be performed by Contractor as specified in Contract Documents and with additional frequency as Contractor or Ecology deems necessary during backfilling to verify Contractor is returning to the pre-construction, unless specified otherwise, Property elevations and topography.
- C. Backfill shall be performed in such a fashion as to avoid damage to buried utilities, including the use of light compaction equipment adjacent to and over utilities. Damage to utility lines shall be repaired promptly and service restored, at no additional cost to Ecology.
- D. Unless otherwise indicated by the pre-construction Property topography and/or site features, Contractor shall make grade changes gradual. Blend slope into level areas. Construct uniform grades between spot elevations or contours.
- E. To the extent where buried utility lines are exposed by excavation activities, the Contractor shall install tracer tape of the appropriate type aligned over the utility, in accordance with all codes and requirements applicable.
- F. Where landscape bed surface materials are to be placed, common fill thickness shall be adjusted to permit six (6) inches of topsoil plus the thickness of the restored landscape bed surface materials.
- G. Contractor shall employ all appropriate measures to control dust both within the Project Site and the surrounding properties and areas.
1. Sprinkle backfill material and exposed subsurfaces as necessary to limit dust to lowest practicable level. Do not use water to extent causing flooding, contaminated runoff or icing.
- H. Remove and dispose of surplus fill materials from site to an approved waste site, at no additional cost to Ecology.

**3.04 GRADING FOR RESTORING EXISTING SLOPES**

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- A. Lifts of backfill for restoring existing slopes shall be placed level and compacted evenly. No void spaces between lifts of fill and vertical bench cuts will be permitted.
- B. Make grade changes gradual. Blend slope into level areas. Construct uniform grades between spot elevations or contours.
  - 1. Fill slopes shall be overbuilt by twelve (12) inches and then trimmed back to the required slope to maintain a firm face.

**3.05 TOPSOIL GRADING PROCEDURES**

- A. In excavations greater than six (6) inches, once placement and compaction of common fill is completed in areas where vegetation, trees, shrubs, sod or hydroseed are to be installed, Contractor shall place a minimum of six (6) inches of topsoil to complete earthwork restoration.
  - 1. Topsoil shall be installed to the specified tolerances in this Section.
  - 2. Where landscape bed or sod surface materials are to be placed, common fill thickness shall be adjusted to permit six (6) inches of topsoil plus the thickness of the restored landscape bed or sod surface materials.
  - 3. Protect topsoil from erosion at all times during transport, stockpiling, and placement. Imported topsoil should not be delivered in muddy or frozen condition.
- B. In excavations of six (6) inches or less, in areas where vegetation, trees, shrubs, sod or hydroseed are to be installed, Contractor shall place topsoil to complete earthwork restoration providing adequate depth for the thickness of the surface material to meet required final grades.
  - 1. Topsoil shall be installed to the specified tolerances in this Section.
  - 2. Protect topsoil from erosion at all times during transport, stockpiling, and placement. Imported topsoil should not be delivered in muddy or frozen condition.
- C. The topsoil shall be evenly spread over the backfill surface in one (1) or two (2) lifts as follows.
  - 1. Contractor shall place the first lift of a minimum of six (6) inches in loose thickness. This lift shall be placed and lightly compacted according to the sod supplier's requirements and specifications. Contractor shall

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- place the second lift of as many inches as needed to achieve the finish grade tolerances.
2. Rake, float, drag, roll, and perform all necessary operations to remove surface irregularities and to provide a firm, smooth surface with positive surface drainage. Remove all rocks, sticks and other debris two (2) inches and larger. Box drag and hand rake all areas to receive sod or hydroseed.
  3. Use only hand methods for topsoil placement inside the CRZ of trees indicated to Remain In Place.
- D. After placement of topsoil and before sod or other surfacing is placed, Contractor shall verify by surveying that all elevation control points and final elevation control marks surveyed as specified in **SECTION 02 21 13 – SURVEYS** achieve the tolerances specified in this Section. Contractor shall verify the grade transition between each point and mark, confirming grades accurately represent the required topography of each Property. Excavate or install an additional lift of material as necessary to achieve required grades.
- E. Contractor shall employ all appropriate measures to control dust both within the Project Site and the surrounding properties and areas.
1. Sprinkle backfill material and exposed subsurfaces as necessary to limit dust to lowest practicable level. Do not use water to extent causing flooding, contaminated runoff, or icing.
- F. Remove and dispose of surplus topsoil materials to an approved waste site, at no additional cost to Ecology.

**3.06 LANDSCAPE BED GRADING PROCEDURES**

- A. In excavations greater than twelve (12) inches, Contractor shall place a minimum of twelve (12) inches of topsoil to complete earthwork restoration in areas designated as landscape beds providing adequate depth for the thickness of the surface material to meet required final grades to the specified tolerances in this Section.
- B. In excavations of twelve (12) inches or less, Contractor shall place topsoil to complete earthwork restoration in areas designated as landscape beds providing adequate depth for the thickness of the surface material to meet required final grades to the specified tolerances in this Section. Contractor shall not place common fill in landscape beds where excavation was twelve (12) inches or less.

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- C. During topsoil grading for landscape beds and where necessary to restore pre-construction conditions for the landscape bed, reinstall edging materials.
1. Edging shall not extend more than 0.25 inches above the top of landscape bed surface materials and surrounding sod, unless pre-construction conditions of a specified landscape bed edging indicate more exposure.
    - a. Contractor shall be responsible for documenting pre-construction materials, alignment, and condition of all landscape edging before Work is performed on each Property.
- D. After placement of topsoil and before either planting of new vegetation or placement of landscape bark or other landscape bed surface materials, if weed control fabric requires replacement, place the weed control fabric uniformly over the entire surface of the landscape bed.
1. Weed control fabric shall only be installed in landscape beds and areas specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**, unless otherwise directed by Ecology.
    - a. Weed control fabric installed in areas not specified for weed control fabric shall be removed by the Contractor at no additional cost to Ecology.
  2. Multiple sheets of weed control fabric shall be overlapped a minimum of six (6) inches or in accordance with manufacturer's directions, whichever is greater.
  3. Weed control fabric pins shall be installed vertically through the fabric with a maximum spacing between pins of ten (10) lineal feet.
- E. After placement of topsoil, and weed control fabric if specified, the specified landscape surfacing materials shall be placed. All landscape beds or other areas where topsoil will remain exposed shall be surfaced with landscape bark unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
1. In landscape beds where new vegetation is to be planted by Contractor, and if landscape surfacing materials in those beds are to be a gravel, decorative crushed rock, round rock, or lava rock, a minimum of two (2) inches of surfacing material shall be placed in landscape bed to meet final grade, unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.

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2. In landscape beds where no new vegetation is to be planted by Contractor, and if landscape surfacing materials in those beds are to be a gravel, decorative crushed rock, round rock, or lava rock, a minimum of four (4) inches of surfacing material shall be placed in landscape bed to meet final grade, unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
3. In landscape beds where landscape bark is used, a minimum of two (2) inches of landscape bark shall be placed above final grade established by topsoil for each landscape bed, unless otherwise specified for a specific landscape bed in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
  - a. Through consultation with Ecology, taper landscape bark at edge of landscape bed to match surrounding surface.
4. Coverage of surfacing materials over weed control fabric, if present, shall be complete and prevent any direct exposure of weed control fabric to the sun or open air. No visible fabric shall be permitted.

**3.07 AGGREGATE SURFACING, PAVER STONE SURFACING AND CONCRETE SUBGRADES GRADING PROCEDURES**

- A. Areas to receive aggregate surfacing or paver stone/brick surface features shall be backfilled with common fill to establish a subgrade six (6) inches below the restored final site grades and contours surveyed by Contractor.
- B. Areas to receive sidewalks, concrete drives or concrete slabs-on-grade shall be backfilled with common fill to establish a subgrade three (3) inches below the restored site grades and contours surveyed by Contractor.
- C. The upper twelve (12) inches of common fill shall be compacted to a firm and unyielding condition with no pumping or other evidence of instability. The Ecology Representative shall verify compacted state of subgrade prior to placement/installation of overlying site features.
  1. Where less than the required firm and unyielding compact condition is indicated by the Ecology Representative, Contractor shall remove and replace the substandard fill or apply additional compactive effort and moisture condition the soil as necessary until a firm compact condition is attained.

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- D. Contractor shall protect all subgrade surfaces from damage or deterioration as indicated in this Section.

**3.08 SITE TOLERANCES**

- A. Tolerance for common fill at all elevation locations surveyed by Contractor as specified in **SECTION 02 21 13 – SURVEYS** shall be -1.0 inches to 0.0 inches.
- B. Tolerance for finished grades, after placement of topsoil and final surfacing (i.e. sod, gravel surfacing, or specified landscaped area surfacing), shall match required contours, elevations, elevation control points, and final elevation control marks established by pre-construction surveys performed by the Contractor as specified in **SECTION 02 21 13 – SURVEYS**. This shall include all surveyed elevations within each Property and elevations indicated by pre-construction photography and/or video documentation by either Contractor or Ecology.
  - 1. Tolerance for elevation control points after placement of topsoil and final surfacing material within each Property shall be -0.5 inches to +0.5 inches.
- C. Tolerance for final elevation control marks on permanent and/or Remain In Place buildings, structures, and other site features shall be  $\pm 0.0$  inches.
- D. After final grades are achieved, if more than 75 percent of the elevation control points and final elevation control marks applicable to each lawn area Decision Unit area and individual landscape bed area are lower than the measured elevations, but still within the tolerances specified in this Section, Contractor shall add and lightly compact topsoil to raise the overall elevation area closer to the measured elevations.
  - 1. If these survey measurements are not performed and all corrections specified in this Section are not implemented by Contractor before placement of sod or other surface material, Contractor shall remove sod or other surface materials, correct grade, and restore at no additional cost to Ecology.
- E. Tolerance for restoration of all clotheslines, fences, buildings, and other site and landscape structures and features, unless otherwise specified in the Project Manual shall be  $\pm 1.0$  inches in any direction.

**3.09 PROTECTION**

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- A. If subgrade or fill soils become loosened, disturbed, unstable, or too saturated to perform Work, Contractor shall excavate to expose undisturbed soil. Replacement with properly placed and, if specified, compacted fill shall be required. The Contractor shall reduce disturbance by the following methods:
  - 1. Limit construction traffic over unprotected soil.
  - 2. Provide gravel “working mats”
  - 3. Slope excavated surfaces to promote runoff.
  - 4. Seal exposed surfaces by rolling with a smooth drum compactor or rubber tired roller at the end of each working day and removing wet surface soil prior to filling each day.
  
- B. Contractor shall repair and provide the additional excavation, disposal, and import of replacement material at no additional cost to Ecology.
  
- C. Topsoil and soil imported to the site with a fines content higher than 10 percent, shall be considered moisture sensitive. Placement and compaction of moisture sensitive fill during periods of wet weather should be avoided by the Contractor. Fill that becomes too wet for either proper compaction or subsequent restoration Work activities shall be removed and replaced at no additional cost to Ecology.
  
- D. Contractor shall cover stockpiles during periods of wet weather to prevent the imported fill from becoming too wet to properly place and compact.

**3.10 CLEANING**

- A. Dispose of waste, surplus, and unsuitable materials according to laws, regulations, and ordinances offsite at no additional cost to Ecology.
  
- B. Contractor shall maintain hauling routes clean and free of debris resulting from Work of this Section at no additional cost to Ecology.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 14 00 – UNIT PAVING**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for construction and reconstruction of concrete, brick and stone paver surfaces to be Removed and Reinstalled during Work.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTALS**

- A. Concrete, brick, and stone paver units and edging material product data.
- B. Base and Bedding Material Samples: Submit sample of sufficient size to allow for confirmation testing for each material a minimum of one (1) calendar week prior to the use of material, unless otherwise indicated.
  - 1. Where multiple sources for materials are to be used for the Work, one (1) sample shall be submitted for each source.
- C. Base and Bedding Material Test Reports:
  - 1. Sieve analysis for each material.
  - 2. Where multiple sources for materials are to be used for the Work, a complete set of test reports shall be submitted for each source.
  - 3. Contractor shall submit test reports to Ecology demonstrating that materials meet the Specifications in the Contract Documents. If tests indicate materials do not meet specified requirements, the Contractor shall change materials and retest at no additional cost to Ecology.
- D. Base and Bedding Material Certificates: WSDOT (or equivalent) pit certification for each pit source of material.

**1.04 QUANTITY MEASUREMENT AND CONTRACT SUM**

- A. Contractor shall include in the Contract Sum the cost of materials to restore all unit paver areas specified in the Project Manual.

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- B. All import, placement and compaction of materials required to achieve the completed structures, as indicated in the Project Manual, shall be included in the Contract Sum and no adjustments shall be allowed by Ecology.
  - 1. If the Contractor's sequencing of the Work requires stockpiling and double handling of materials, this shall be accomplished within the Contract Sum amount at no additional cost to Ecology.

**1.05 QUALITY ASSURANCE**

- A. Contractor shall comply with applicable provisions of the following standard specifications and documents:
  - 1. WSDOT Standard Specifications Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Standard Specifications).
  - 2. City of Everett Construction Standards.
  - 3. ASTM C936 Standard Specification for Solid Concrete Paving Units

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Stockpile materials on site within clearing limits, away from potential damage by Work activities, and at approved locations. The Contractor shall be responsible for protecting the stockpiled material.

**1.07 DIMENSIONS AND LAYOUTS**

- A. The Contractor shall be responsible for furnishing, setting and marking all line and location stakes, including offsets and general construction staking. When Work requiring control is being performed, all necessary related equipment, supplies and instruments shall be on site and in use by Contractor. A qualified layout engineer, surveyor, or technical specialist must be assigned to the Contractor's crew for this Work. This equipment and personnel must be available, at no additional cost to Ecology, for the purpose of verifying layout, conformance of elevation, and certifying the accuracy of Work on the Project Site.
- B. The Contractor shall be responsible for preserving all benchmarks and stakes and the replacement of any that are displaced or missing.
- C. The Contractor shall be responsible for review of all utility purveyor, and City, County or State records relative to the existing underground utilities.

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The Contractor shall be responsible for avoiding damage to these facilities and shall restore all utilities at Contractor's own expense.

- D. The Contractor shall notify the Ecology Representative immediately if underground utilities not shown in the Project Manual are encountered.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

- A. Concrete, brick or stone paver units:
1. To the maximum extent practicable, Contractor shall reuse existing concrete, brick or stone paver units in the restoration of all unit paving areas.
  2. Where additional paver unit materials are necessary, such as replacement of destroyed existing paver units or areas identified for expansion of existing unit paving areas, and unless otherwise specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**, Contractor shall supply paver units equal to the type and appearance of existing, adjacent paver units.
- B. Base materials: Material shall be manufactured from ledge rock, talus or gravel and shall be 5/8" minus for top course. Base materials shall conform to the gradations of Section 9-03.9(3) of the WSDOT Standard Specification.
- C. Bedding sand: Sand shall conform to the requirements for concrete sand in ASTM C33 with the following revisions:
1. The materials shall be uniform in quality and substantially free from wood, roots, bark, and other extraneous material.
- D. Edging materials: Edging materials shall be wood, steel, aluminum or plastic materials specifically designed and intended for confining the final edges of paving unit surfaces.
1. Material shall conform to manufacturer's requirements for specific pavers used for each Property.

**PART 3 - EXECUTION**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 14 00 – UNIT PAVING**

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**3.01 CONTRACTOR PREPARATION AND VERIFICATION OF CONDITIONS**

- A. Before commencing placement and compaction of base materials, Contractor shall:
1. Verify survey benchmark and intended elevations for the Work are made available for the Work as specified. Set stringlines, posts, or similar means to indicate elevations for base materials, bedding sand and paving units.
  2. Verify buildings site features, improvements, trees and vegetation specified to Remain In Place are protected and prominently marked.
  3. Verify erosion and sediment control measures are in place and operating properly.
  4. Verify the placement and compaction of imported fill has been completed to the subgrade elevations below the specified thickness of base materials, bedding sand and paving units.
  5. Verify required lines, levels, contours and datum have been identified and conflicts have been resolved with Ecology.
  6. Verify existing grade elevations to be matched.
  7. Confirm the existing subgrade has been compacted to a firm and unyielding condition. Soft and/or unstable areas identified by the Ecology Representative shall be overexcavated to a firm subgrade and replaced at no additional cost to Ecology.
    - a. No topsoil shall be placed beneath areas of unit pavers.

**3.02 GRADING PROCEDURES**

- A. Place and compact base material.
1. Place the base material in two (2) single, continuous lifts with a maximum of four (4) inches in loose thickness per lift.
  2. Compact the base material to a firm and unyielding condition.
  3. Water settling or jetting shall not be permitted as a means of compaction.
  4. Placement and compaction of base material shall be observed by the Ecology Representative and hand-probed to confirm firm and unyielding compact condition.
  5. Where less than the required firm compact condition is indicated by the Ecology Representative, Contractor shall remove and replace the

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- substandard surfacing or apply additional compactive effort and moisture condition as necessary until a firm compact condition is attained.
6. Contractor shall not place surfacing over ponded surface water or existing subgrade surfaces which are yielding, disturbed, or softened.
  7. The finished surface of the compacted base material shall have tolerance of  $\pm 3/8$  inch over 10 feet in any direction.
- B. Placement and compaction of unit paver base material shall be performed in such a fashion as to avoid damage to buried utilities, including the use of light compaction equipment adjacent to, and over, utilities. Damage to utility lines shall be repaired promptly and service restored, at no additional cost to Ecology.
- C. Place bedding sand.
1. Sand shall be placed and screeded to a consistent, even thickness between one (1) inch and 1- $\frac{1}{2}$  inch.
  2. Sand shall not be used to fill depressions in base material.
- D. Contractor shall employ all appropriate measures to control dust both within the Project Site and the surrounding properties and areas.
1. Sprinkle surfacing material and exposed subsurfaces as necessary to limit dust to lowest practicable level. Do not use water to extent causing flooding, contaminated runoff or icing.
- E. Remove and dispose of surplus materials to an approved waste site, at no additional cost to Ecology.

**3.03 UNIT PAVER INSTALLATION**

- A. Paver units shall be placed snugly against surrounding units to restore surface to existing condition or as specified herein.
1. Pavers shall be firmly founded on bedding material and shall be level and flush with the edges of adjacent paver units.
  2. String lines or similar methods shall be used to keep the pattern of paving units straight.

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- B. After placement of pavers, edging material shall be installed in conformance with manufacturer's requirements and relevant work standards.
  - 1. Edging shall be spiked firmly a minimum of every twenty-four (24) lineal inches.
- C. Sand shall be used to completely fill joints. Vibration shall be used to permit complete filling of joints with sand.
  - 1. All paver units within three (3) feet of unfinished edges shall have the joints full at the end of each work day.

**3.04 SITE TOLERANCES**

- A. Finish grade after placement of unit paver surfaces shall match contours and elevations established by pre-construction surveys performed by the Contractor.
- B. Tolerance for restoration of all paver surfaces, unless otherwise specified in the Contract Documents shall be  $\pm 3/8$  inch over 10 feet in any direction and no greater than 1/8 inch difference in height between adjacent pavers.

**3.05 PROTECTION**

- A. If base or bedding surfaces become loosened or disturbed, Contractor shall excavate to expose undisturbed soil. Replacement with properly compacted surfacing shall be required. The Contractor may reduce disturbance by the following methods:
  - 1. Limit construction traffic over unprotected areas.
- B. Contractor shall repair and provide the additional excavation, disposal, and import of replacement material at no additional cost to Ecology.
- C. If pavers loosen or displace during period of Work, Contractor shall correct the condition at no additional cost to Ecology according to the Specifications.

**3.06 CLEANING**

- A. Dispose of waste, surplus, and unsuitable materials according to laws, regulations, and ordinances offsite at no additional cost to Ecology.

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- B. Contractor shall maintain hauling routes clean and free of debris resulting from Work of this Section at no additional cost to Ecology.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 15 00 – AGGREGATE SURFACING**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for placement and compaction of aggregate surfacing for drive areas and landscaping.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTALS**

- A. Samples:

1. Submit minimum ten (10) pound sample for each material a minimum of one (1) calendar week prior to the use of material, unless otherwise indicated.
2. Where multiple sources for materials are to be used for the Work, one (1) sample shall be submitted for each source.

- B. Test Reports:

1. Sieve analysis for each material.
2. Where multiple sources for materials are to be used for the Work, a complete set of test reports shall be submitted for each source.
3. Contractor shall submit test reports to Ecology demonstrating that materials meet the Specifications. If tests indicate materials do not meet specified requirements, the Contractor shall change materials and retest at no additional cost to Ecology.

- C. Certificates:

1. WSDOT pit certification for each pit source of material.

**1.04 QUANTITY MEASUREMENT AND CONTRACT SUM**

- A. Contractor shall include in the Contract Sum the cost of achieving all restored final aggregate surfacing grades present at the Project Site.

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**SECTION 32 15 00 – AGGREGATE SURFACING**

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- B. All import, placement and compaction required to achieve the final grades and completed structures, as indicated in the Project Manual, shall be included in the Contract Sum.
  - 1. If the Contractor's sequencing of the Work requires stockpiling and double handling of materials, this shall be accomplished within the Contract Sum amount at no additional cost to Ecology.

**1.05 QUALITY ASSURANCE**

- A. Contractor shall comply with applicable provisions of the following standard specifications and documents:
  - 1. WSDOT Standard Specifications Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Standard Specifications).
  - 2. City of Everett Construction Standards.
  - 3. ASTM C136 Standard Method for Sieve Analysis of Fine and Course Aggregate.
  - 4. ASTM D422 Method for Particle Size Analysis of Soils
  - 5. ASTM D4318 Liquid Limit, Plastic Limit and Plasticity Index of Soils
  - 6. AASHTO T176 Plastic Fines in Graded Aggregates and Soils by use of the Sand Equivalent Test.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Stockpile materials on site within clearing limits and at approved locations. The Contractor shall be responsible for protecting the stockpiled material.
- B. Direct surface water away from stockpile site so as to prevent erosion or deterioration of materials.
- C. When removing stockpile, leave area in a clean and neat condition. Grade site surface to prevent free-standing surface water.
- D. Comply with WSDOT Section 3-02.2(6). Contractor shall provide survey stakes for stockpiles.
- E. Material integrity will be influenced by the weather conditions and the Contractor's handling and protection of the material as it is handled and placed. It is the sole responsibility of the Contractor to protect material from

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the elements. Material that is deemed unsuitable due to lack of protection shall be rejected by Ecology. The Contractor shall be responsible for removing such material and replacing with acceptable material at no additional cost to Ecology.

- F. Maintain toe of stockpiled material at least six (6) feet from edges of trenches and excavations. Pile so surface water is prevented from flowing into excavations. Provide free access to fire hydrants, water valves, meters; private driveways; and leave clearance to enable the free flow of storm water in gutters, conduits, and natural water courses.

**1.07 WET WEATHER CONDITIONS**

- A. Exposed slopes shall be sloped away from existing buildings and other structures.

**1.08 DIMENSIONS AND LAYOUTS**

- A. The Contractor shall be responsible for furnishing, setting and marking all line and location stakes, including offsets and general construction staking. When Work requiring control is being performed, all necessary related equipment, supplies and instruments shall be on site and in use by Contractor. A qualified layout engineer, surveyor, or technical specialist must be assigned to the Contractor's crew for this Work. This equipment and personnel must be available, at no additional cost to Ecology, for the purpose of verifying layout, conformance of grading, and certifying the accuracy of Work on the Project Site.
- B. The Contractor shall be responsible for preserving all benchmarks and stakes and the replacement of any that are displaced or missing.
- C. The Contractor shall be responsible for review of all utility purveyor, and City, County or State records relative to the existing underground utilities. The Contractor shall be responsible for avoiding damage to these facilities and shall restore all utilities at Contractor's own expense.
- D. The Contractor shall notify the Ecology Representative immediately if underground utilities not shown in Contract Documents are encountered.

**PART 2 - PRODUCTS**

**2.01 AGGREGATE**

- A. 5/8-minus Crushed Rock

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1. 5/8-minus crushed rock shall be hard durable stone (crushed basalt or river gravel), fully fractured, and generally gray in color. The material shall be free of inorganic debris and trash, and free of soil and other types of rock.
2. 5/8-minus crushed rock gradation shall meet the following specifications:

SIEVE SIZE	PERCENT PASSING (By Weight)
¾-inch	99-100
½-inch	80-100
#4	46-66
#40	8-24
#200*	0-10
% Fracture	75% min

\*Indicates wet sieve test.

**B. 1 ¼-minus Crushed Rock**

1. 1 ¼-minus crushed rock shall be manufactured from ledge rock, talus or gravel. The material shall be uniform in quality and substantially free from wood, roots, bark, debris, and other extraneous material.
2. 1 ¼-minus crushed rock shall meet the following requirements for grading:

SIEVE SIZE	PERCENT PASSING (By Weight)
1 ¼-inch	99-100
1-inch	80-100
5/8-inch	50-80
#4	25-45
#40	3-18
#200	<7.5
% Fracture	>75
Sand Equivalent	>40

3. The combined aggregate retained on the No. 4 sieve shall have at least one fractured face and shall not contain more than 0.15 percent wood waste.
4. Contractor shall only use 1-1/4-inch minus crushed aggregate as a final surface material where specified in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION** or when indicated by Ecology in writing.

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C. Pea Gravel

1. Pea gravel shall be:
  - a. Washed gravel having been naturally deposited by a river or stream.
  - b. Uniform in size.
  - c. Free of organic matter, soil, non-river gravel, and trash.
  - d. Composed of round rocks that may be varied in color.
  - e. Originated from the Puget Sound Region of Washington State.
2. Pea gravel gradation shall meet the following specifications:

SIEVE SIZE	PERCENT PASSING (By Weight)
½-inch	99-100
3/8-inch	74-100
#4	3-30
#8	0-10

**PART 3 - EXECUTION**

**3.01 CONTRACTOR PREPARATION AND VERIFICATION OF CONDITIONS**

- A. Before commencing placement and compaction of aggregate surfacing, Contractor shall:
  1. Verify survey benchmark and intended elevations for the Work are made available for the Work as specified.
  2. Verify buildings site features, improvements, trees and vegetation specified as Remain In Place are protected and prominently marked.
  3. Verify erosion and sediment control measures are in place and operating properly.
  4. Verify the excavation and removal of contaminated soil has been completed to the depths indicated in the Contract Documents, unless otherwise indicated.
  5. Verify required lines, levels, contours and datum have been identified and conflicts have been resolved with Ecology.
  6. Verify existing grade elevations to be matched.

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7. Confirm the existing subgrade has been compacted to a firm and unyielding condition. Soft and/or unstable areas identified by the Ecology Representative shall be overexcavated to a firm subgrade and replaced at no additional cost to Ecology.
  - a. No topsoil shall be placed beneath areas of aggregate.

**3.02 GRADING PROCEDURES**

- A. Grade areas adjacent to buildings and structures in a manner that provides positive drainage away from foundations and slabs-on-grade and prevents ponding at the building or structure, itself.
- B. Place aggregate surfacing in areas of the Project Site indicated, to contours and elevations corresponding to the restored site grades and contours in those areas as surveyed by Contractor.
  1. Place the aggregate surfacing in a single, continuous lift of six (6) inches in loose thickness.
  2. Compact the aggregate to a firm and unyielding condition.
  3. Add additional aggregate lifts as necessary to achieve final grade and required tolerances. Compact the aggregate to a firm and unyielding condition
  4. Water settling or jetting shall not be permitted as a means of compaction.
  5. Placement and compaction of aggregate surfacing shall be observed the Ecology Representative and hand-probed or proofrolled to confirm firm and unyielding compact condition.
  6. Where less than the required firm compact condition is indicated by the Ecology Representative, Contractor shall remove and replace the substandard surfacing or apply additional compactive effort and moisture condition as necessary until a firm compact condition is attained.
  7. Contractor shall not place surfacing over ponded surface water or existing subgrade surfaces which are yielding, disturbed, or softened.
- C. Placement and compaction of aggregate surfacing shall be performed in such a fashion as to avoid damage to buried utilities, including the use of light compaction equipment adjacent to and over utilities. Damage to utility lines shall be repaired promptly and service restored, at no additional cost to Ecology.

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 15 00 – AGGREGATE SURFACING**

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- D. Use only hand methods for backfilling inside either a ten (10) foot radius of tree base or the drip line (whichever is greater) of trees indicated to remain.
- E. Contractor shall employ all appropriate measures to control dust both within the Project Site and the surrounding properties and areas.
  - 1. Water surfacing material and exposed subsurfaces as necessary to limit dust to lowest practicable level. Do not use water to extent causing flooding, contaminated runoff or icing.
- F. Remove and dispose of surplus aggregate surfacing materials to an approved waste site, at no additional cost to Ecology.

**3.03 SITE TOLERANCES**

- A. Tolerance for finished grades, after placement of final surfacing shall match pre-construction contours, elevations, elevation control points, and final elevation control marks established by pre-excavation surveys performed by the Contractor as specified in **SECTION 02 21 13 – SURVEYS**. This shall include all surveyed elevations within each Property; final elevation marks on permanent and/or Remain In Place buildings, structures, and other site features; and elevations indicated by pre-construction photography and/or video documentation by either Contractor or Ecology.
- B. Tolerances for elevation control points and final elevation control marks on restored gravel surfaces shall be:
  - 1. For surfaces of 5/8-inch minus crushed aggregate surfaces:  $\pm 0.5$  inches.
  - 2. For surfaces of 1-1/4-inch minus crushed aggregate surfaces:  $\pm 1.0$  inch.
- C. After final grades have been achieved, if more than 75 percent of the elevation control points and final elevation control marks applicable to the gravel surfacing area are lower than the required elevations, but still within the tolerances specified in this Section, Contractor shall add and compact additional gravel aggregate to raise the overall elevation area closer to the required elevations.

**3.04 PROTECTION**

- A. If aggregate surfacing becomes loosened or disturbed, Contractor shall excavate to expose undisturbed soil. Replacement with properly

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 15 00 – AGGREGATE SURFACING**

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compacted surfacing shall be required. The Contractor may reduce disturbance by the following methods:

1. Limit construction traffic over unprotected areas.
- B. Contractor shall repair and provide the additional excavation, disposal, and import of replacement material at no additional cost to Ecology.

**3.05 CLEANING**

- A. Dispose of waste, surplus, and unsuitable materials according to laws, regulations, and ordinances offsite at no additional cost to Ecology.
- B. Contractor shall maintain hauling routes clean and free of debris resulting from Work of this Section at no additional cost to Ecology.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 31 00 – FENCES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all labor, materials, equipment, transportation, and services to reinstall or replace existing fencing removed to perform Work, as well as extend existing fencing as indicated in the Project Manual.
- B. Work shall include identification of existing fencing materials and configuration, and matching of new fencing materials to existing.

**1.02 RELATED SECTIONS**

- A. Section 01 35 43.10 – Green Construction Practices

**1.03 SUBMITTALS**

- A. Based upon Contractor's existing conditions assessments, Contractor shall submit Product Data for each fence to be constructed or reconstructed, including details of all component parts and installation details for the fence installation.

**PART 2 - PRODUCTS**

**2.01 MATERIALS FOR FENCING**

- A. Fencing materials shall match the materials of the existing fences for each Property to be extended, reinstalled, and/or replaced. Contractor shall inventory materials as part of Contractor's existing conditions assessments before Work is began for each Property.
- B. Concrete materials shall be in accordance with **SECTION 03 30 00 – CAST-IN-PLACE CONCRETE.**

**PART 3 - EXECUTION**

**3.01 EXCAVATION**

- A. Stake out or mark fence locations for approval by the Ecology Representative prior to digging post footings and installation.

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**SECTION 32 31 00 – FENCES**

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- B. Set posts uniform in horizontal and vertical alignment, equally spaced, as indicated for existing conditions assessed by Contractor. Hold tops of all concrete footings at least six (6) inches below finish grade.
- C. No post holes shall be left open or unguarded during installation.
- D. Contractor shall be familiar with locations of all underground utilities including irrigation.
  - 1. Notify Ecology promptly of any conflict encountered.
- E. Do not contaminate topsoil in seeded or planted areas with soil from post excavations. Use plastic sheeting or other measures to keep materials separated.
  - 1. Remove and Dispose of excess soils to an approved disposal site.
- F. Excavations for fence posts shall be as follows, unless otherwise indicated.
  - 1. Ends and Corners (for fencing up to six (6) feet high): Twelve (12) inch hole diameter, eighteen (18) inches deep, twelve (12) inch post embedment in concrete.
  - 2. Line (for fencing up to six (6) feet high): Twelve (12) inch hole diameter, eighteen (18) inches deep, twelve (12) inch post embedment in concrete.
  - 3. Ends and Corners (for fencing six (6) feet high and taller): Twelve (12) inch hole diameter, forty-two (42) inches deep, thirty-six (36) inch post embedment in concrete.
  - 4. Line (for fencing up to six (6) feet high and taller): Twelve (12) inch hole diameter, thirty-six (36) inches deep, thirty (30) inch post embedment in concrete.

**3.02 SITE TOLERANCES**

- A. Tolerance for restoration of all fences, unless otherwise specified in the Project Manual shall be  $\pm 1.0$  inch in any direction.

**3.03 PLACING CONCRETE**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 31 00 – FENCES**

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- A. Place around posts in a continuous pour. Compact concrete by hand rodding.
- B. Finish tops of concrete by hand trowel to provide a sloped (crown) dome six (6) inches below finish grade unless noted otherwise.
  - 1. There shall be a one (1) inch (crown) slope away from post.

**3.04 FENCE CONSTRUCTION**

- A. Fence construction shall be in accordance with manufacturer's requirements as applicable for each fence type. Use fasteners, hardware, and brackets that provide for long life and that are compatible with the fence materials.

**3.05 CLEANING**

- A. Remove and dispose excess excavated material resulting from post installations at an approved disposal site.
- B. Clean up all concrete spills and splatter, as well as other handling and installation

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 23 – SEGMENTAL BLOCK RETAINING WALLS**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Contractor shall provide all materials, equipment, and labor for restoration of existing segmental block retaining wall systems in accordance with this Section.
- B. Contractor shall conform to the lines, grades, design, and dimensions of existing walls and rock slopes specified for replacement with segmental block retaining walls in the Project Manual.
- C. Work includes furnishing and installing concrete leveling pad, unit drainage fill and backfill to the lines and grades matching pre-construction conditions.

**1.02 REFERENCES**

- A. American Society for Testing and Materials (ASTM)
  - 1. ASTM C140 Sampling and Testing Concrete Masonry Units
  - 2. ASTM C1372 Specification for Dry-Cast Segmental Retaining Wall Units
  - 3. ASTM D422 Particle-Size Analysis of Soils
  - 4. ASTM D4318 Liquid Limit, Plastic Limit and Plasticity Index of Soils
  - 5. ASTM D4475 Horizontal Shear Strength of Pultruded Reinforced Plastic Rods
  - 6. ASTM D4476 Flexural Properties of Fiber Reinforced Pultruded Plastic Rods
  - 7. ASTM D6638 Connection Strength - Reinforcement/Segmental Units
  - 8. ASTM D6916 Shear Strength Between Segmental Concrete Units
- B. National Concrete Masonry Association (NCMA)
  - 1. NCMA SRWU-1 Test Method for Determining Connection Strength of SRW
  - 2. NCMA SRWU-2 Test Method for Determining Shear Strength of SRW

**1.03 SUBMITTALS**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 23 – SEGMENTAL BLOCK RETAINING WALLS**

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- A. Contractor shall submit a Manufacturer's certification, prior to start of Work, that the retaining wall system components meet the requirements of this Specification.
- B. Contractor shall submit product data and construction shop drawings for the specified walls. The layout, techniques and material evaluations shall be in accordance with the manufacturer's design manual.

**1.04 QUALITY ASSURANCE**

- A. Contractor shall provide backfill testing/confirmation and quality assurance inspection during earthwork and wall construction operations. Ecology may perform additional backfill testing and quality assurance inspection as needed. Ecology's quality assurance program does not relieve the Contractor of responsibility for quality control and wall performance.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification have been received.
- B. Contractor shall protect all materials from damage due to Work and Project Site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the Work.

**PART 2 - PRODUCTS**

**2.01 PRODUCT DEFINITIONS**

- A. Concrete Block Unit (or equivalent): A concrete retaining wall element machine-made from Portland cement, water, and aggregates.
- B. Unit Drainage Fill: Drainage aggregate that is placed within and immediately behind the concrete block units.

**2.02 CONCRETE BLOCK UNITS**

- A. Concrete block units for segmental block retaining walls shall conform to the following architectural requirements:
  - 1. Face color: Concrete gray, unless otherwise specified. Ecology may specify standard manufacturers' color.
  - 2. Face finish: Sculptured rock face in angular tri-planer configuration, or equal.

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 23 – SEGMENTAL BLOCK RETAINING WALLS**

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3. Bond configuration: Running with bonds nominally located at midpoint of vertically adjacent units, in both straight and curved alignments.
  4. Exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of ten (10) feet under diffused lighting.
- B. Concrete block units shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.
- C. Concrete block units shall conform to the following structural and geometric requirements measured in accordance with ASTM C140 Sampling and Testing Concrete Masonry Units:
1. Compressive strength:  $\geq 3000$  psi;
  2. Absorption:  $\leq 6$  % for standard weight aggregates;
  3. Dimensional tolerances:  $\pm 1/8$  inches from nominal unit dimensions not including rough split face,  $\pm 1/16$  inches unit height - top and bottom planes;
  4. Unit size: 8 inches (height) x 18 inches (width) x 12 inches (depth) minimum;
  5. Unit weight: 75-lbs/unit minimum for standard weight aggregates.
- D. Concrete block units shall conform to the following performance testing:
1. Inter-unit shear strength in accordance with ASTM D6916 (NCMA SRWU-2): 600-plf minimum at 2-psi normal pressure.
- E. Concrete block units shall conform to the following constructability requirements:
1. Vertical setback:  $\pm 1/8$  inch per course (near vertical) or  $\pm 1.0$  inch per course per the design;
  2. Alignment and grid positioning mechanism: fiberglass pins, two per unit minimum;
  3. Maximum horizontal gap between erected units shall be  $\leq 1/2$  inch.

**2.03 SHEAR CONNECTORS**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 23 – SEGMENTAL BLOCK RETAINING WALLS**

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- A. Shear connectors for concrete block units shall be 1/2-inch diameter thermoset isophthalic polyester resin-pultruded fiberglass reinforcement rods to provide connection between vertically and horizontally adjacent units with the following requirements:
1. Flexural Strength in accordance with ASTM D4476: 128,000 psi minimum;
  2. Short Beam Shear in accordance with ASTM D4475: 6,400 psi minimum.

**2.04 BASE LEVELING PAD MATERIAL**

- A. Material shall consist of either a minimum of two (2) inches of non-reinforced concrete or a minimum of four (4) inches of 5/8-inch-minus crushed aggregate gravel.

**2.05 UNIT DRAINAGE FILL**

- A. Unit drainage fill shall consist of clean 1-inch minus crushed stone or crushed gravel meeting the following gradation tested in accordance with ASTM D422:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 in.	100
3/4-in.	75-100
No. 4	0 - 10
No. 50	0 - 5

- B. Drainage fill shall be placed within the cores of, between, and behind the units. Not less than one (1) cubic foot of drainage fill shall be used for each square foot of wall face, unless otherwise specified.

**PART 3 - EXECUTION**

**3.01 BASE LEVELING PAD PREPARATION**

- A. Leveling pad trench shall provide for both a minimum four (4) inch final embedment below the lowest elevation of the toe of each segmental block wall and the thickness of the leveling pad material (either concrete or crushed aggregate gravel) to be used by Contractor.
- B. Leveling pad material shall be placed to the lines and grades required and extend laterally a minimum of three (3) inches in front and behind the concrete block wall unit.

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 23 – SEGMENTAL BLOCK RETAINING WALLS**

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- C. Leveling pad shall be prepared to ensure full contact to the base surface of the concrete block units.
- D. If crushed aggregate is used as leveling pad material, Contractor shall compact material to a firm and unyielding state before placing the first course of blocks. Contractor shall allow the Ecology Representative to verify compaction before placing the first course of blocks.

**3.02 CONCRETE BLOCK UNIT INSTALLATION**

- A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and ensure that all units are in full contact with the base and properly seated.
- B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.
- C. Install shear/connecting devices per manufacturer's recommendations.
- D. Place and compact unit drainage fill within and behind wall units. Place and compact backfill soil behind unit drainage fill. Follow wall erection and unit drainage fill closely with adjacent backfill.
- E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed two (2) courses.

**3.03 BACKFILL PLACEMENT**

- A. Backfill shall be common fill placed, spread, and compacted as specified in **SECTION 31 23 23 - FILL**.
- B. Backfill shall be placed and compacted in lifts not to exceed six (6) inches in loose thickness. Lift thickness shall be adjusted to achieve the density required by the Ecology Representative.
- C. Backfill shall be compacted to firm and unyielding state, which shall be verified by the Ecology Representative before the next lift of soil is placed. Backfill shall be moisture-conditioned by Contractor to prevent soil from being either too wet (resulting in pumping or other unstable conditions) or too dry (preventing adequate compaction) as determined by the Ecology Representative.

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 23 – SEGMENTAL BLOCK RETAINING WALLS**

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- D. Only lightweight hand-operated equipment shall be allowed within three (3) feet of the back edge of the concrete block unit.
- E. At the end of each day's operation, the Contractor shall slope the last lift of backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

**3.04 CAP INSTALLATION**

- A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer, such as Keystone Kapseal, or equal.

**3.05 AS-BUILT CONSTRUCTION TOLERANCES**

- A. Vertical alignment:  $\pm 1.5$  inches over any ten (10) lineal feet distance.
- B. Wall Batter: within two (2) degrees of design batter.
- C. Horizontal alignment:  $\pm 1.5$  inches over any ten (10) lineal feet distance.
- D. Corners, bends and curves:  $\pm 1.0$  feet to required location.
- E. Maximum horizontal gap between erected units shall be  $\leq 1/2$  inch.

**3.06 FIELD QUALITY ASSURANCE**

- A. The Ecology Representative shall provide quality assurance during construction. This shall include evaluation of backfill placement and compaction as specified in the Contract Documents. This does not relieve the Contractor from securing additional construction quality control testing as necessary.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 63 – ROCK-ARMORED SLOPES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all labor, materials, and equipment for construction of rock-armored slopes where existing slopes of that type are present in a Property and are not otherwise specified to be removed and replaced by another site improvement.
- B. This shall include site features identified and specified as “rockery” or “rock wall” in **DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**.
- C. Work includes furnishing and installing leveling pad, placing and compacting backfill to recreate the slope to the lines and grades matching pre-construction conditions and placement of rock on slope.

**1.02 SUBMITTALS**

- A. Samples:
  - 1. Submit minimum fifty (50) pound sample for each material a minimum of one (1) calendar week prior to the use of material, unless otherwise indicated.
  - 2. Where multiple sources for materials are to be used for the Work, one (1) sample shall be submitted for each source.
- B. Test Reports:
  - 1. Sieve analysis for each material.
  - 2. Where multiple sources for materials are to be used for the Work, a complete set of test reports shall be submitted for each source.
- C. Certificates:
  - 1. WSDOT pit certification for each pit source of material.

**1.03 QUALITY ASSURANCE**

- A. Contractor shall comply with applicable provisions of the following standard specifications and documents:

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 32 63 – ROCK-ARMORED SLOPES**

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1. WSDOT Standard Specifications Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction (WSDOT Standard Specifications).
2. City of Everett Construction Standards.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Stockpile materials on site within clearing limits and at locations approved by Ecology. The Contractor shall be responsible for protecting the stockpiled material.
- B. When removing stockpile, leave area in a clean and neat condition. Grade site surface to prevent free-standing surface water.
- C. Comply with WSDOT Section 3-02.2(6). Contractor shall provide survey stakes for stockpiles.
- D. Maintain toe of stockpiled material at least six (6) feet from edges of trenches and excavations. Pile so surface water is prevented from flowing into excavations. Provide free access to fire hydrants, water valves, meters; private driveways; and leave clearance to enable the free flow of storm water in gutters, conduits, and natural water courses.

**PART 2 - PRODUCTS**

**2.01 ROCK FOR ROCK-ARMORED SLOPES AND CHINKING MATERIAL**

- A. Material shall be hard, sound and durable material, free from seams, cracks, and other defects tending to destroy its resistance to weather and shall be in accordance with Section 9-13.7(1) of the WSDOT Standard Specifications.
- B. Where possible, Contractor may reuse rock materials existing at the Project Site for each Property where a rock-armored slope is to be reconstructed.

**2.02 QUARRY SPALLS**

- A. Quarry spalls shall conform to Section 9-13.6 of the WSDOT Standard Specifications.

**2.03 SEPARATION GEOTEXTILE FABRIC**

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**SECTION 32 32 63 – ROCK-ARMORED SLOPES**

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- A. Separation Geotextile Fabric shall be in accordance with **SECTION 31 23 23 – FILL**, Paragraph 2.01 D.

**PART 3 - EXECUTION**

**3.01 PREPARATION**

- A. The exposed surface where rock is to be placed shall be in a firm condition, with no visible signs of erosion and instability. Areas found to be deficient by observation of the Ecology Representative shall be corrected by Contractor at no additional cost to Ecology.
- B. The slope surface shall be covered with a separation geotextile fabric. The fabric shall be rolled out evenly and placed to cover the entire slope surface. Where necessary to fit around buildings, structures, improvements, slabs, trees and vegetation to Remain In Place, fabric can be cut accordingly. A minimum of six (6) inches of overlap shall be made between different sheets of separation geotextile fabric.
1. Contractor shall minimize traffic over fabric until buried under rock.

**3.02 ROCK PLACEMENT**

- A. Rock shall be placed in courses to maximize contact with surrounding rocks and the slope surface. Contractor shall properly seat rocks so they are stable and do not shift.
- B. Contractor shall correct rock placement as slope armoring is constructed to maintain the stability of the rock face. Where collapses occur, Contractor shall promptly correct.
- C. Smaller rocks shall be used as chinking material.

**3.03 FIELD QUALITY ASSURANCE**

- A. The Ecology Representative shall provide quality assurance during construction. This shall include evaluation of backfill placement and compaction as specified in the Contract Documents. This does not relieve the Contractor from securing additional construction quality control testing as necessary.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 92 19.16 – HYDROSEEDING**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for hydroseeding as indicated in the Project Manual or as requested by Ecology, including, protection, maintenance, guarantee and replacement.

**1.02 QUALITY ASSURANCE**

- A. Seed: Conform to Washington State Department of Agriculture Rules for Seed Certification.
- B. Fertilizer: Conform to Washington State Department of Agriculture Laws and Federal Specification O-F-241D pertaining to commercial fertilizers.

**1.03 SUBMITTALS**

- A. All Seed Materials: Contractor shall submit seed mix as recommended by supplier for the specific application and season of the year Work shall be performed. Contractor shall not use non-native species of grass for seed mix.
  - 1. At least two (2) weeks prior to the start of excavation, submit documentation that all seed has been ordered.
- B. Fertilizers, Binders and Other additives: Contractor shall submit Product Data as recommended by supplier for the specific application and season of the year Work shall be performed.
- C. Maintenance Schedule.
- D. Maintenance Log.

**1.04 PROTECTION OF EXISTING CONDITIONS**

- A. Protect Work, adjacent property, and public. Contractor shall be responsible for any damage or injury arising from Contractor's actions or neglect.

**1.05 SCHEDULING AND COORDINATION**

- A. Confine Work to areas designated. Do not disturb existing vegetation outside of Project Site. Protect all trees and shrubs within Project Site not

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designated to be removed. Repair or replace vegetation damaged as a result of Contractor's operation to satisfaction of Ecology at no additional cost to Ecology.

- B. All hydroseeding identified for each Property shall be completed by Contractor before the Maintenance and Finishing Period for each Property can begin, unless otherwise directed by Ecology.

**1.06 GUARANTEE REPLACEMENT**

- A. Contractor shall guarantee a uniform stand of grass with no bare spots in seeded areas at time of Final Completion.
  - 1. Reseed, with the seed and in the manner originally specified, any area which fails to vigorously establish a uniform stand for any reason whatsoever.
  - 2. Fill to finish grade with approved topsoil and seed, as specified, all seeded areas with evidence of settlement or erosion.
  - 3. Repeat all such reseeding until Final Completion at no additional cost to Ecology.
- B. During Maintenance and Finishing Period, Contractor shall not be responsible for replacing grass stands destroyed or damaged by vandalism or accidents caused by vehicles other than the Contractor's, or Acts of God, or severe cold as substantiated by a 25-year low temperature records (exceeding 25-year low), provided that Contractor has exercised due care to protect Work. Should replacement fall due during non-planting season, Contractor may request Ecology's permission to defer planting until proper season. If permission is granted, immediately remove and dispose of dead grass stands, including all roots. Holes shall be backfilled properly with topsoil and finished graded until proper planting season occurs. Grass used for replacement shall be of same kind originally seeded and shall be seeded as originally specified.

**PART 2 - PRODUCTS**

**2.01 SEED MIX**

- A. Minimum three Cultivars (1/3 of each) as approved. Seed at minimum rate of 8 pounds/1,000 square feet or greater if recommended by supplier.

	Proportions By Weight	Percent Purity	Percent Germination
Perennial Rye ("Triumph" 3-way blend)	70%	98%	90%

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Fine Fescue	20%	98%	90%
Kentucky Bluegrass	10%	98%	90%

- B. Hydromulch: Silva-fiber or approved at minimum rate of 2000 lbs/acre.
- C. Tackifier: Use on all sloped areas steeper than 5:1 at manufacturer's suggested rate.

**2.02 FERTILIZERS AND SOIL AMENDMENTS**

- A. General:
  - 1. Approved brands conforming to applicable State fertilizer laws. Uniform in composition, dry, free-flowing, delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed analysis. All fertilizers must be EPA approved.
- B. Installation Fertilizer:
  - 1. Total available Nitrogen: 16% by weight (of which 50% is derived from controlled release sources including Nutralene).
  - 2. Total available phosphorous: 16% by weight.
  - 3. Total available potassium: 16% by weight.
- C. Maintenance Fertilizer:
  - 1. Total available Nitrogen: 21% by weight (of which 50% is derived from controlled release sources).
  - 2. Total available Phosphorous: 12% by weight.
  - 3. Total available Potassium: 12% by weight.
  - 4. Contractor may substitute a seasonally appropriate maintenance fertilizer, in the event hydroseeding supplier recommends a different fertilizer during the maintenance and finishing period for each Property where hydroseeding is used. Contractor shall communicate this substitution in writing to Ecology, including explanation. When authorized by Ecology, Contractor may use substitute at no additional cost to Ecology.
- D. Other amendments as recommended by suppliers:
  - 1. Adjust the basic quantities of the following micronutrients as recommended for:
    - a. Iron.

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- b. Manganese.
- c. Molybdenum.
- d. Copper.
- e. Zinc.
- f. Boron.

**PART 3 - EXECUTION**

**3.01 PREPARATION**

- A. After confirmation that topsoil placement has met the required elevation and grading tolerances, apply Installation Fertilizer at the rate of 10 pounds per 1,000 square feet. Rake to incorporate.
  - 1. Contractor shall demonstrate to the Ecology Representative that finish grades have been confirmed by surveying and all surfaces have been restored to its pre-construction condition.
- B. Finish surfaces by raking smooth and even and lightly compact with roller or equal. Level out surface undulations and irregularities to tolerances specified in Contract Documents and recompact as necessary.
- C. The Ecology Representative shall observe fertilization. Contractor shall notify Ecology a minimum of two (2) working days in advance of fertilization activities.

**3.02 SEEDING**

- A. After finish grades are verified by Contractor with the Ecology Representative, seed with hydroseeder and hydromulch at the rate specified.
- B. Seed, fertilizer and water shall be thoroughly mixed together and then applied under pressure to the area to be treated, by means of hydroseeding equipment specifically designed for this purpose and by operators trained in the use of this equipment.
- C. The constantly agitated mixture shall be applied on a calm day, operating on a front so that the mixture is evenly distributed over the area at the specified rate.

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- D. Complete each front before commencing the next.
- E. Care must be taken to minimize over-spray onto adjacent areas of the Project Site.
- F. All seeding must be complete prior to project Substantial Completion date.
- G. Hydroseed during periods which are normal for such work, as determined by season, weather conditions, and accepted practice. At the option and on the full responsibility of the Contractor, seeding operations may be conducted under unseasonable conditions without additional compensation and at no additional cost to Ecology.

**3.03 PROTECTION**

- A. Contractor shall protect seeded areas from wind, storm water and trespassing. Contractor shall treat and reseed damaged portions as required, at no additional cost to Ecology.

**3.04 MAINTENANCE FERTILIZATION**

- A. Contractor shall apply maintenance fertilizer in conformance with the season in which Work is performed. At scheduled time approved by Ecology, Contractor shall apply a minimum of one (1) maintenance fertilizer before the end of the Maintenance and Finishing Period specified in this Section, unless otherwise authorized by Ecology in writing.

**3.05 RESEEDING**

- A. In areas where grass coverage is observed to be weak or dead before Final Completion, repair any settlement and/or erosion channels, reseed, and refertilize areas.

**3.06 MAINTENANCE AND FINISHING PERIOD**

- A. It shall be the Contractor's responsibility to continuously and vigorously maintain all the seeded areas of this Work from time of installation for a minimum of sixty (60) calendar days.
- B. All grass areas shall be watered regularly and as necessary due to weather conditions by Contractor during the maintenance and finishing period by thorough sprinkling as needed to keep the ground moist, the vegetation healthy, and to prevent wilting. Care shall be exercised to prevent soil erosion.

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- C. Contractor shall provide temporary irrigation as needed. Temporary irrigation provisions shall be sufficient to water all areas at least once daily. Watering methods shall be designed to minimize overspray on to paved surfaces or established landscape areas.
1. Contractor shall not use the private water supply of any Property of the Work as a source of water for temporary irrigation.
- D. Seeded Areas:
1. Maintain by watering, weekly mowing (remove all clippings), continuous weeding, reseeding, fertilizing, herbicide treatment, rolling and top dressing, and other necessary operations to establish and maintain an even, dark green, deep rooted, thick and vigorous stand of grass. Temporarily water any areas that are not irrigated, until establishment.
  2. Replace any seeded areas which fail to show vigorous growth. Fill and seed all areas which settle, as specified in the Contract Documents. At the end of the Maintenance and Finishing Period and prior to Final Completion, the seeded areas shall be a flourishing, dense, vigorous, uniform, deeply rooted thick stand of specified grass with no bare spots and no weeds whatsoever.
  3. Prior to the start of the Maintenance and Finishing Period specified in this Section, Contractor shall submit a detailed maintenance schedule for Ecology review and approval.
  4. During the Maintenance and Finishing Period specified in this Section:
    - a. At no time are lawns and grass stands to be yellow, lacking in vigor, or not thriving.
    - b. Provide a high level of maintenance as required to keep lawns and grass stands in top condition.
    - c. For any portions of the landscape that are not in top condition at the point of acceptance, provide additional maintenance at no additional cost to Ecology until such time as deficient areas are free of weeds or bare spots and in top quality condition.
    - d. Provide Ecology a maintenance log for each Property during the duration of the maintenance and finishing work that details exact operations performed, including dates, name of person responsible, and amount of time spent on site.
      - 1) Contractor shall provide copies as requested by Ecology.
- E. Schedule all maintenance and finishing work with Ecology with a minimum of one (1) weeks' notice to allow for Ecology coordination and

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communication with Property Owner and/or Tenant(s) and to avoid conflicts with other Work.

- F. Contractor shall complete all restoration for each Property during that Property's maintenance and finishing period, unless otherwise authorized by Ecology in writing. This shall include all remedy Work identified during Work activities for the Property by Contractor, Ecology and the Ecology Representatives.

**3.07 CLEANUP**

- A. A general cleanup shall be made immediately after and as part of all Work done at the Project Site.
  - 1. Adjacent areas shall be cleaned to the extent that the Work may scatter litter or debris.
- B. Such cleanup shall include pick-up and removal from the Project Site all clippings, trimmings, leaves, and all other litter and debris originating from any source whatsoever.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 92 23 – SODDING**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for placement of sod as indicated in the Project Manual, including, protection, maintenance, guarantee and replacement.

**1.02 QUALITY ASSURANCE**

- A. Sod Grass: Conform to Washington State Department of Agriculture Rules for Seed Certification.
- B. Fertilizer: Conform to Washington State Department of Agriculture Laws and Federal Specification O-F-241D pertaining to commercial fertilizers.

**1.03 SUBMITTALS**

- A. Sod: Contractor shall submit sod Product Data as recommended by supplier for the specific application and season of the year Work shall be performed.
  - 1. At least two (2) weeks prior to the start of excavation, submit documentation that sod has been ordered.
- B. Fertilizers and Other additives: Contractor shall submit Product Data as recommended by supplier for the specific application and season of the year Work is to be performed.
- C. Maintenance Log.

**1.04 PROTECTION OF EXISTING CONDITIONS**

- A. Protect Work, adjacent property, and public. Contractor shall be responsible for any damage or injury arising from Contractor's actions or neglect.

**1.05 SCHEDULING AND COORDINATION**

- A. Contractor shall begin installation of sod no more than one (1) calendar week after completing final placement and grading of topsoil, unless otherwise authorized by Ecology in writing.
- B. Confine Work to areas designated. Do not disturb existing vegetation outside of Project Site. Protect all trees and shrubs within Project Site not

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designated to be removed. Repair or replace vegetation damaged as a result of Contractor's operation to satisfaction of Ecology at no additional cost to Ecology.

- C. All sod to be installed for each Property shall be completed by Contractor before the Maintenance and Finishing Period for each Property can begin, unless authorized by Ecology in writing.

**1.06 GUARANTEE REPLACEMENT**

- A. Contractor shall guarantee a uniform sod lawn with no bare spots until the end of the 12 month warranty period.
1. Replace with identical sod and in the manner originally specified any area which fails to vigorously establish a uniform lawn for any reason whatsoever.
  2. Fill to finish grade with approved topsoil and sod as specified for all sod areas with evidence of settlement or erosion before Final Completion.
  3. Repeat all such resodding until the end of the 12 month warranty period at no additional cost to Ecology.
- B. During Maintenance and Finishing Period, Contractor shall not be responsible for replacing lawn destroyed or damaged by vandalism or accidents caused by vehicles other than the Contractor's, or Acts of God, or severe cold as substantiated by a 25-year low temperature records (exceeding 25-year low), provided that Contractor has exercised due care to protect Work. Should replacement fall due during non-planting season, Contractor may request Ecology's permission to defer planting until proper season. Grass used for replacement shall be of same kind originally installed and shall be as originally specified.

**PART 2 - PRODUCTS**

**2.01 SOD**

- A. Sufficient quantity of sod, in rolls, to replace lawns as specified in the Project Manual.
1. Sod shall be Perfect Green Sod manufactured by Country Green or equal acceptable to Ecology.
  2. Contractor shall not use non-native species of grass for sod.

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3. All sod used for a single Property shall be identical in appearance and be provided by the same supplier. Sod installed on adjacent Properties shall also be as uniform as possible.
4. The sod shall be field grown a minimum of one (1) calendar year prior to use in Work, have a well-developed root structure, and be free of weeds, disease, and insect damage.
5. Prior to cutting, the sod shall be green, in an active and vigorous state of growth, and mowed to a height not exceeding one (1) inch. The sod shall be cut with a minimum of one (1) inch of soil adhering.

**2.02 FERTILIZERS AND OTHER ADDITIVES**

- A. Approved brands conforming to applicable State fertilizer laws. Uniform in composition, dry, free-flowing, delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed analysis. All fertilizers must be EPA approved.
- B. Installation Fertilizer:
  1. Total available Nitrogen: 16% by weight (of which 50% is derived from controlled release sources including Nutralene).
  2. Total available phosphorous: 16% by weight.
  3. Total available potassium: 16% by weight.
- C. Maintenance Fertilizer:
  1. Total available Nitrogen: No more than 18% by weight (of which 50% is derived from controlled release sources).
  2. Total available Phosphorous: 12% by weight.
  3. Total available Potassium: 12% by weight.
  4. Contractor may substitute a seasonally appropriate maintenance fertilizer, in the event sod supplier recommends a different fertilizer during the maintenance and finishing period for each Property where sod is used. Contractor shall communicate this substitution in writing to Ecology, including explanation. When authorized by Ecology, Contractor may use substitute at no additional cost to Ecology.
- D. Other amendments as recommended by suppliers:

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1. Dolomitic Limestone at minimum rate of 50 pounds per 1,000 square feet.
2. Gypsum to counteract salinity as recommended by sod supplier.
3. Adjust the basic quantities of the following micronutrients as recommended for:
  - a. Iron.
  - b. Manganese.
  - c. Molybdenum.
  - d. Copper.
  - e. Zinc.
  - f. Boron.

**PART 3 - EXECUTION**

**3.01 PREPARATION**

- A. After confirmation that topsoil placement has met the required elevation and grading tolerances, apply Installation Fertilizer at the rate of 10 pounds per 1,000 square feet. Rake to incorporate.
  1. Contractor shall demonstrate to the Ecology Representative that finish grades have been confirmed by surveying and all surfaces have been restored to its pre-construction condition.
- B. Finish surfaces by raking smooth and even and lightly compact with roller or equal. Level out surface undulations and irregularities to tolerances specified in Contract Documents and recompact as necessary.
- C. The Ecology Representative shall observe fertilization. Contractor shall notify Ecology a minimum of two (2) working days in advance of fertilization activities.

**3.02 SOD PLACEMENT**

- A. After finish grades are verified by Contractor with the Ecology Representative and the Installation Fertilizer has been applied as specified in this Section, Contractor shall install sod in accordance with supplier's and manufacturer's requirements.

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- B. Strips of sod shall be placed such that the root zone of the sod shall be within the specified final tolerances for elevation control marks and the root crown set to the grade of all adjacent final elevation control marks, sidewalks and/or curbs.
- C. Sod shall be placed without voids and have end joints staggered and tightly fitted.
- D. Where new sod is placed adjacent to pre-existing sod, the seam shall be made flush, with a smooth and continuous grade, no gaps or ridges. Sod shall not be installed on top of pre-existing sod under any circumstances. If the pre-existing sod has been damaged as a result of construction activity (directly or indirectly) the pre-existing sod will be repaired to provide a uniform transition with the new sod.
- E. Sod strips shall be placed not later than forty-eight (48) hours after being cut.
- F. Sod shall be moistened by sprinkling or equal methods prior to being installed.
- G. On sloped areas, sod shall be laid with the long dimension oriented perpendicular to the slope surface.
- H. Following placement, sod shall be lightly rolled with a smooth, water-filled type roller, or equal, as recommended by the sod supplier. After rolling, sod shall be watered thoroughly by sprinkling.
  - 1. Contractor shall prevent traffic on sod until it has become well-established.
- I. All sod placement must be completed prior to Substantial Completion.
- J. Sod installation shall be performed during periods which are normal for such Work, as determined by season, weather conditions, and accepted practice. At the option and on the full responsibility of the Contractor, sodding operations may be conducted under unseasonable conditions without additional compensation and at no additional cost to Ecology.

**3.03 PROTECTION**

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**SECTION 32 92 23 – SODDING**

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- A. Contractor shall protect sod areas from storm water and trespassing as necessary until sod is established. Contractor shall treat and resod damaged portions as required, at no additional cost to Ecology.

**3.04 MAINTENANCE FERTILIZATION**

- A. Contractor shall apply maintenance fertilizer in conformance with the season in which Work is performed and as directed by the sod supplier. At scheduled time approved by Ecology, Contractor shall apply a minimum of one (1) maintenance fertilizer before the end of the Maintenance and Finishing Period specified in this Section, unless otherwise authorized by Ecology in writing.

**3.05 RESODDING**

- A. In areas where sod coverage is observed to be weak or dead before Final Completion, repair any settlement and/or erosion channels, resod, and refertilize all areas.

**3.06 MAINTENANCE AND FINISHING PERIOD**

- A. It shall be the Contractor's responsibility to continuously and vigorously maintain all the sodded areas of this Work from time of installation for a minimum of sixty (60) calendar days.
- B. All sod areas shall be watered regularly and as necessary due to weather conditions by Contractor during the maintenance and finishing period by thorough sprinkling as needed to keep the ground moist, the sod healthy, and to prevent wilting.
- C. Contractor shall provide temporary irrigation as needed. Temporary irrigation provisions shall be sufficient to water all areas at least once daily. Watering methods shall be designed to minimize overspray on to paved surfaces or established landscape areas.
  - 1. Contractor shall not use the private water supply of any Property of the Work as a source of water for temporary irrigation.
- D. Sod Areas:
  - 1. Maintain by watering, weekly mowing (remove all clippings), continuous weeding, resodding, fertilizing, herbicide treatment, rolling and top dressing, and other necessary operations to establish and maintain an

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even, dark green, deep rooted, thick and vigorous stand of grass. Temporarily water any areas that are not irrigated, until establishment.

2. Care shall be exercised to prevent soil erosion.
3. During the first two (2) weeks, at a minimum all sod shall be watered on a daily basis. During warm weather, sod may need to be lightly watered during mid- and late afternoon hours when water use and evaporation is greatest.
4. Schedule irrigation so the lawn becomes firm enough to mow between waterings.
5. Begin mowing the area as top growth develops, but keep the traffic level as low as possible. The recommended height for sod lawn grass is three (3) inches or more. Mow frequently enough so that no more than 1/3 of the grass blade is removed at one (1) mowing.
6. Replace any sodded areas which fail to show vigorous growth. Fill and sod all areas which settle below the tolerances specified in the Contract Documents.
7. At the end of the maintenance and finishing period for each Property, the sod areas shall be a flourishing, dense, vigorous, uniform, deeply rooted thick stand of specified grass with no bare spots and no weeds whatsoever.
8. Areas not conforming to the Specifications of this Section shall remain the Contractor's responsibility, at no additional cost to Ecology, until the conditions meet the requirements of the Contract Documents.

E. During the maintenance and finishing period specified in this Section:

1. At no time are lawns and grass stands to be yellow, lacking in vigor, or not thriving.
2. At no time are trees and shrubs to be lacking in vigor and not thriving.
3. Provide a high level of maintenance as required to keep lawns and grass stands in top condition.
4. For any portions of the sod that are not in top condition at the point of acceptance, provide additional maintenance, at no additional cost to Ecology, until such time as deficient areas are free of weeds or bare spots and in top quality condition.
5. Provide Ecology a maintenance log for each Property during the duration of the maintenance and finishing work that details exact operations performed, including dates, name of person responsible, and amount of time spent on site.

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- a. Contractor shall provide copies as requested by Ecology.
- F. Schedule all maintenance and finishing work with Ecology with a minimum of one (1) weeks' notice to allow for Ecology coordination and communication with Property Owner and/or Tenant(s) and to avoid conflicts with other Work.
- G. Contractor shall complete all sodding and restoration for each Property during that Property's maintenance and finishing period, unless otherwise authorized by Ecology in writing. This shall include all remedy Work identified during Work activities for the Property by Contractor, Ecology and the Ecology Representatives.

**3.07 CLEANUP**

- A. A general cleanup shall be made immediately after and as part of all Work done at the Project Site.
  - 1. Adjacent areas shall be cleaned to the extent that the Work may scatter litter or debris.
- B. Such cleanup shall include pick-up and removal from the Project Site all clippings, trimmings, leaves, and all other litter and debris originating from any source whatsoever.

END OF SECTION

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 93 33 – SHRUBS AND TREES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Provide all materials, equipment and labor necessary for planting of trees, shrubs, ground cover, and other vegetation as indicated in the Project Manual, including, protection, maintenance, guarantee and replacement.

**1.02 QUALITY ASSURANCE**

- A. Vegetative Material: All vegetative material, Washington grade No. 1 as per State of Washington Department of Agriculture Order Numbers 1229, 1230 and 1322. Quality, size and condition as determined by standards set forth in the aforementioned Standards and the American Association of Nurserymen Standard ANSI 260.1-1973. Vegetation names shall conform to latest edition of "Standardized Plant Names" as adopted by American Joint Committee of Horticulture Nomenclature.
- B. Fertilizer: Conform to Washington State Department of Agriculture Laws and Federal Specification O-F-241D pertaining to commercial fertilizers.

**1.03 SUBMITTALS**

- A. Plant Availability Statement: After completion of Contractor's existing conditions assessments and before commencing clearing and grubbing or earthwork activities at the Project, Contractor shall submit to Ecology a statement that all vegetative material required for the Project is available during the Contract Time and has been ordered by Contractor.
- B. Product Data for Fertilizers, Binders and Other additives: Contractor shall submit Product Data as recommended by supplier for the specific application and season of the year Work is to be performed.
- C. Maintenance Log.

**1.04 PROTECTION OF EXISTING CONDITIONS**

- A. Protect Work, adjacent property, and public. Contractor shall be responsible for any damage or injury arising from Contractor's actions or neglect.

**1.05 SCHEDULING AND COORDINATION**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 93 33 – SHRUBS AND TREES**

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- A. Confine Work to areas designated. Do not disturb existing vegetation outside of Project Site. Protect all trees and shrubs within Project Site not designated to be removed. Repair or replace vegetation damaged as a result of Contractor's operation to satisfaction of Ecology at no additional cost to Ecology.
- B. All vegetative material to be installed shall be completed by Contractor by the start of the Maintenance and Finishing Period for each Property, unless authorized by Ecology in writing.

**1.06 GUARANTEE REPLACEMENT**

- A. Guarantee in a healthy, thriving condition all trees, shrubs and groundcovers until end of the 12 month warranty period.
  - 1. Plant containers and root balls shall be free of weeds.
  - 2. Any plants requiring replacement, or missing, must be replaced prior to start of Maintenance and Finishing Period.
  - 3. During the Maintenance and Finishing Period, all dead diseased, dying, broken or disappeared plant materials from any cause except those noted below shall be replaced immediately by the Contractor at no additional cost to Ecology.
  - 4. Use specified vegetation and plant as specified; guarantee active, healthy growth.
- B. During guarantee period, Contractor shall not be responsible for replacing vegetation destroyed or damaged by vandalism or accidents caused by vehicles other than the Contractor's, or Acts of God, or severe cold as substantiated by a 25-year low temperature records (exceeding 25-year low), provided that Contractor has exercised due care to protect work. Should replacement fall due during non-planting season, Contractor may request Ecology's permission to defer planting until proper season. If permission is granted, immediately remove and dispose of dead plants, including all roots. Holes shall be backfilled properly with topsoil and finish graded until proper planting season occur. Vegetation used for replacement shall be of same kind originally planted and shall be planted as originally specified.

**PART 2 - PRODUCTS**

**DIVISION 32 – EXTERIOR IMPROVEMENTS**  
**SECTION 32 93 33 – SHRUBS AND TREES**

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**2.01 VEGETATION MATERIALS**

- A. Quantities, species and varieties, size and condition as identified in the Project Manual and as indicated in Contractor's existing conditions assessment inventory. Vegetation shall be Washington Grade No. 1, fresh, well foliated, in prime condition when in leaf, exhibiting normal habit of growth, having all buds intact and free of disease, injury, insects, insect eggs, larva, indication of strawberry root weevil, all seeds and weed roots.
1. Trees and shrubs shall be provided in a minimum two (2) gallon size.
  2. Other vegetation shall be provided in a minimum four (4) inch pot size unless otherwise directed by Ecology.
- B. All vegetation material shall be ordered immediately following completion of Contractor's existing conditions assessments which shall include identification of all vegetation to be Removed and Replaced In Kind. Contractor shall be responsible for assuring that vegetation of specified sizes and quantities shall, in fact, be as specified at the time of planting.
- C. All vegetation shall be from stock which has been acclimated to conditions prevailing at the Project Site and which have been consistently cultivated and grown in these conditions. No cold storage vegetation.?
1. All grafted trees shall be grafted at ground level.
- D. Ball and burlapped (B&B) stock shall have a natural ball sufficient to insure survival and healthy growth
1. Bare root materials shall have sufficient root system to insure survival and healthy growth.
- E. No substitutions shall be made without the written approval of Ecology. Requests for substitutions must be made at the time that documentation of ordered vegetative material is provided. The substitution request must be accompanied by written proof from at least two (2) major vegetation suppliers that the specified vegetation is not available.

**2.02 FERTILIZERS AND SOIL AMENDMENTS**

- A. General:

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1. Approved brands conforming to applicable State fertilizer laws. Uniform in composition, dry, free-flowing, delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed analysis. All fertilizers must be EPA approved.
  2. All fertilizers shall conform to the requirements of the vegetative material supplier(s) for each plant type and kind.
- B. Trees, Shrubs and Ground Cover:
1. Formula 4.2.2 "Transplanter" as manufactured by Pacific Agro Co., with Hercules Nitroform and W.R. Grace's "Magamp" and trace elements; or equal.
  2. Apply fertilizer at the following rate (ounces per plant) or as directed by vegetative material supplier and fertilizer manufacturer:
    - a. Trees: 8 oz.
    - b. Shrubs: 4 oz.
    - c. Ground Cover: 2 oz.
- C. Agriform Tablets:
1. Planting tablets, 21-gram size, as manufactured by Agriform International Chemicals, Inc., 20-10-5 analysis; or equal.
  2. Apply tablets at the following rate (tablets per plant) or as directed by vegetative material supplier and fertilizer manufacturer:
    - a. Trees: 4 tablets
    - b. Shrubs: 2 tablets
    - c. Ground Cover: 1 tablet

**2.03 STAKES AND GUYS**

- A. If Contractor elects to use stakes and guys, material as needed for new planting shall be provided by Contractor at no additional cost to Ecology.

**2.04 LANDSCAPING BARK**

- A. Landscaping bark placed at the surface around vegetation and in landscape beds and other areas where specified shall be derived from Douglas fir, pine, or hemlock species.

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1. Bark shall be ground so that a minimum of ninety-five (95) percent of the material shall pass through a 1 ½-sieve and no more than fifty-five (55) percent, by loose volume, shall pass through a ¼-inch sieve.
2. The bark shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life.
3. Bark shall be installed with a 1 inch buffer around the trunk or stem of the plant to prevent rot.

**PART 3 - EXECUTION**

**3.01 PREPARATION**

- A. After placement of topsoil, stake tree locations and position shrubs above ground. Contractor and the Ecology Representative shall both verify locations from pre-existing photographs and/or video and measurements collected by Contractor during surveying and existing conditions assessment.
  1. Make field adjustments to avoid obstructions to planting.
  2. Ecology reserves the right to field adjust vegetation locations prior to planting.

**3.02 PLANTING SCHEDULE**

- A. Plant trees, shrubs and groundcover during periods which are normal for such work, as determined by season, weather conditions, and accepted practice.
- B. Contractor shall notify Ecology after completion of existing conditions assessments and before clearing and grubbing for each Property if Contractor identifies trees, shrubs, groundcover, and other vegetation that cannot be planted during the Contract Time.
  1. Notification shall include a presentation of alternative(s) and supplier recommendations for appropriate seasons.
  2. At Ecology's discretion and on a case-by-case basis, Ecology shall direct Contractor in writing if variations in the Contract Documents shall be permitted.

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- C. Shrubs and trees shall be planted during appropriate seasonable conditions.

**3.03 PLANTING TREES**

- A. Excavate tree pits twice the diameter of the root ball.
  - 1. Excavated soil shall be removed from the site.
  - 2. Thoroughly scarify bottom of pits by shovel cutting to a depth of twelve (12) inches. Sides of pits shall also be shovel cut to help root penetration.
  - 3. If encountered, cut and remove an eighteen (18) inch radius of separation geotextile fabric, based on the center of tree, to permit planting of trees and facilitate growth.
- B. Place tree in upright position in center of pit, release root covering or spread roots.
  - 1. Roots of trees shall be so placed as to have a natural spread and distribution.
  - 2. The tree shall be placed so that no portion of the tree above the root crown will be buried.
- C. Topsoil shall be carefully, thoroughly packed below and around roots.
  - 1. Take care not to injure root system while backfilling and compacting.
- D. Thoroughly water tree and allow water to drain and settle. After water settles, fill again with topsoil to a grade of not more than 1/2 inch higher than the root ball. In sodded and seeded areas, finish grade smooth with surrounding area.
- E. Fertilize trees at the specified rate applied uniformly around circumference of root spread under a cover of two (2) inches of planting mix.
  - 1. Apply Agriform tablets and soil polymers per manufacturer's recommendations.
- F. Stake and guy trees immediately after planting.
  - 1. All supports and trees shall stand vertical.

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**3.04 PLANTING SHRUBS AND GROUND COVERS**

- A. After topsoil placement and approval of finish grade, excavate planting pockets at locations approved by Ecology and as directed to a diameter of twice the root spread and to a depth that shall ensure a three (3) inch cushion of compacted planting mix below the root ball.
  - 1. Excavated soil shall be removed from the site.
  - 2. If encountered, cut and remove an eighteen (18) inch radius of separation geotextile fabric, based on the center of shrub, to permit planting of shrubs and facilitate growth.
- B. Set vegetation upright in center of hole flush with finish grade, release root covering or spreading roots.
  - 1. The roots of the vegetation shall be placed as to have a natural spread and distribution.
- C. Backfill with topsoil to compact backfill and provide slight depression as watering saucer.
  - 1. Care shall be taken not to injure the root system while backfilling and compacting the topsoil.
- D. Fertilize at the rate recommended by supplies and apply uniformly around the circumference of the root spread under a cover of two (2) inches of topsoil.
  - 1. Apply Agriform tablets and soil polymers per manufacturer's recommendations.
- E. Plant ground cover vegetation at in straight, evenly spaced rows.

**3.05 PROTECTION**

- A. Contractor shall protect vegetation from wind, storm water and trespassing. Contractor shall treat and/or replace damaged vegetation as required, at no additional cost to Ecology.

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**3.06 PRUNING AND REPAIR**

- A. Upon completion of the Work, all trees and shrubs shall be pruned as directed by Ecology and any injuries repaired.
- B. Pruning shall be done in such a manner as not to change the natural habit or shape of the vegetation.
  - 1. All cuts shall be made flush, leaving no stubs.
  - 2. On all cuts over 3/4 inch in diameter and bruises or scars on the bark, the injured cambium shall be traced back to living tissue and removed.
  - 3. Wounds shall be smoothed and shaped so as not to retain water, and the treated area shall be coated with approved tree wound compound.

**3.07 LANDSCAPE BARK INSTALLATION**

- A. Immediately after completion of all planting, install landscape bark in all restored landscape beds and areas with a minimum of two (2) inches of bark where landscape bark is specified.

**3.08 MAINTENANCE AND FINISHING PERIOD**

- A. It shall be the Contractor's responsibility to continuously and vigorously maintain all the planted and landscaped areas of this Work from time of installation for a minimum of sixty (60) calendar days.
- B. All vegetation shall be watered regularly and as necessary due to weather conditions by Contractor during the Maintenance and Finishing Period by thorough sprinkling as needed to keep the ground moist, the vegetation healthy, and to prevent wilting.
- C. Contractor shall provide temporary irrigation as needed. Temporary irrigation provisions shall be sufficient to water all areas at least once daily. Watering methods shall be designed to minimize overspray on to paved surfaces or established landscape areas.
  - 1. Contractor shall not use the private water supply of any Property of the Work as a source of water for temporary irrigation.

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- D. Vegetation and landscape beds:
1. Maintain by watering, continuous weeding, fertilizing, as directed by manufacturer and by supplier(s) of each plant, herbicide treatment, and other necessary operations to establish and maintain a healthy color and appearance for each replacement plant.
  2. Care shall be exercised to prevent soil erosion.
  3. During the first two (2) weeks, at a minimum, new vegetation at Project Site shall be watered on a daily basis. During warm weather, new vegetation may need to be lightly watered during mid- and late afternoon hours when water use and evaporation is greatest.
  4. Replace any new vegetation which fail to show vigorous growth and health.
  5. New vegetation not conforming to the Specifications of this Section shall remain the Contractor's responsibility, at no additional cost to Ecology, until the conditions meet the requirements of the Contract Documents.
- E. Provide Ecology a maintenance log for each Property during the duration of the maintenance and finishing work that details exact operations performed, including dates, name of person responsible, and amount of time spent on site.
1. Contractor shall provide copies as requested by Ecology.
- F. Schedule all maintenance and finishing work with Ecology with a minimum of one (1) weeks' notice to allow for Ecology coordination and communication with Property Owner and/or Tenant(s) and to avoid conflicts with other Work.
- G. Contractor shall complete all planting and restoration for each Property prior to that Property's Maintenance and Finishing Period, unless otherwise authorized by Ecology in writing. This shall include all remedy Work identified during Work activities for the Property by Contractor, Ecology and the Ecology Representatives.

**3.09 CLEANUP**

- A. A general cleanup shall be made immediately after and as part of all Work done at the Project Site.

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1. Adjacent areas shall be cleaned to the extent that the Work may scatter litter or debris.
- B. Such cleanup shall include pick-up and removal from the Project Site all clippings, leaves, and all other litter and debris originating from any source whatsoever.
- C. Remove flag labels from all vegetative material.
1. Contractor shall collect and provide all flag labels from each Property to the Ecology Representative by the end of each Property's Maintenance and Finishing Period.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00 – COMMON WORK RESULTS FOR CLEANUP & RESTORATION**

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**PART 1 - GENERAL**

**1.02 DESCRIPTION OF WORK**

- A. Individual Property Cleanup & Restoration subsections of this Section with Property-specific Work including the conditions, directions, unique specifications, and requirements for the Contractor to complete for each Property.
- B. In general, each subsection provides:
1. Required excavation depth and affected areas.
  2. Specifications for selective site demolition of items to be Removed, and subsequent restoration of site features through Reinstallation or Replacement as part of the Work.
  3. Itemized list of site features to Remain in Place and be protected and preserved by Contractor during Work.
  4. Identification of special, Property-specific conditions, if any, which may have an impact or consequence on Contractor's Work. These conditions can include medical and health conditions of the Property Owner and/or Tenant that the Contractor shall incorporate into the schedule, coordination, and execution of Work.
    - a. These conditions or provisions only apply to the individual Property where they are specified.
    - b. Where these special Property conditions or provisions contradict other Specifications, the special Property condition or provision shall take precedence.
- C. These subsections shall be combined with the specifications of other Sections of the Contract Documents as applicable. Each Property subsection is not a comprehensive set of Specifications for the performance and completion of Work on that Property.
- D. Contractor shall refer to **SECTION 02 41 13 – SELECTIVE SITE DEMOLITION** for the definitions of "Remove", "Remove and Salvage", "Remove and Reinstall", "Remove and Replace In Kind", and "Remain In Place".
1. All residence buildings within all Properties in the Project Area are all specified as Remain In Place.

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- E. Some property owners have dogs and have requested a kennel for the period of time that their dog will not have access to the yard. Contractor shall supply and install prior to excavation a chain-link enclosure type kennel for these properties (as noted in the following property-specific sections.) Kennels shall remain in place throughout the 60-day maintenance period for each property.

**1.02 CLARIFICATIONS**

- A. Contractor shall not accept direction of Work or similar from Property Owners and/or Tenants. This shall include changes made to the Specifications regarding features for individual Properties in this Section.
  - 1. If Property Owners and/or Tenants make requests that Contractor change or deviate from the Specifications and, in particular, the Specifications of the subsection applicable to that Property Owner's and/or Tenant's Property, it is the responsibility of the Contractor to promptly direct Property Owner or Tenant to contact Ecology, either directly or through the Ecology Representative.
  - 2. Changes made to the Work by Contractor at the request of Property Owners and/or Tenants without written authorization from Ecology may result in Ecology directing the Contractor to remove the Work performed and re-perform the Work in accordance with the Specifications at no additional cost to Ecology.
- B. The use of the terms "tree" and "shrub" in all subsections of this Section shall not be interpreted as a botanical label of these mapped features. Plants in each Property of significant size were mapped in each site drawing and listed in each individual Property subsection as a "tree" if they were of substantial size and/or could cause "tree-like" restrictions to access for equipment or adequate removal of soil in compliance with the Specifications. Tree diameters are not provided in the Contract Documents and shall be measured at the time Work is performed for each Property.
- C. Where "Section" is referred to in each subsection of this Section, the reference shall be interpreted as that Property's subsection unless otherwise indicated.

**1.03 DECISION UNITS**

- A. Decision Units represent areas of Work.

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**SECTION 36 01 00 – COMMON WORK RESULTS FOR CLEANUP & RESTORATION**

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1. These areas are labeled Decision Units on the Drawings for each subsection in this Section.
- B. References to Work to be performed in a Decision Unit shall apply to the entire area of the Decision Unit.
- C. Work for each Property shall be extended into the City of Everett public right-of-way, up to the City-owned hardscape (i.e. concrete sidewalk, curb, or asphalt or concrete-paved street or alley, as applicable).
  1. The areas between the property line nearest the City right-of-way and the City-owned hardscape have been included in the quantities specified for the applicable Decision Unit.
  2. Permission for extending the Work into these areas of City right-of-way was granted to Ecology by the City of Everett in accordance with Ecology's agreement with the City of Everett regarding the performance of this Work.
- D. All residence buildings on all Properties in the Project Site are specifically excluded from the Decision Unit calculations, including areas and soil removal volumes, unless an area beneath a portion of a building footprint is individually and explicitly specified for removal and replacement in that specific Property's subsection. Hardscapes and large structures are also not included in area and volume calculations. Features not included typically consist of concrete or asphalt driveways and sidewalks, unmovable sheds, decks, and similar.

**1.04 EXCAVATION DEPTHS**

- A. Removal depths specified for each Decision Unit represent the minimum vertical depth of excavation and removal, as measured from the existing surface elevation(s), in accordance with **SECTION 31 23 16 – EXCAVATION**.
  1. Unless otherwise specified in the Contract Documents or authorized by Ecology, additional soil excavation shall not be performed to greater depths than those specified.

**1.05 SITE MAPS AND SITE FEATURES**

- A. Where possible, Ecology has mapped and identified existing site features for each property and listed them in each Property's subsection.
  1. Some, but not all, defined areas described in the individual Property subsections have been identified on the maps for convenience.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00 – COMMON WORK RESULTS FOR CLEANUP & RESTORATION**

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- B. Each site feature has been provided with an approximate location utilizing a letter and number label corresponding to the map grid on the site map for each individual Property.
- C. Site maps represent the approximate condition of the Properties at the time of Contract Document development, and may differ from that encountered at the time of Work.
1. Site features, particularly plants and shrubs, may have been altered, removed, or changed by Property Owners and/or Tenants.
  2. Where the Contractor's existing conditions assessment of a Property differ from that mapped or specified in that Property's subsection, Contractor shall obtain guidance from Ecology in accordance with **SECTION 01 26 13 – REQUESTS FOR INFORMATION.**
- D. The site maps in this Section represent conditions surveyed and located by Ecology during a nine month period prior to the Work.
1. Site maps were not prepared by a surveyor licensed in the State of Washington, and are provided without warranty to Contractor as to their accuracy or completeness, and are intended only as a general reference to probable site conditions, unless otherwise stated in the Project Manual.
  2. Ecology, Property Owner and Tenants shall not be responsible for interpretations or conclusions drawn by Contractor from information furnished in this Section, unless otherwise stated in the Project Manual.
- E. Utilities indicated on the site maps for each subsection represent the location efforts of Ecology's environmental services consultant for the purposes of previous sampling activities only.
1. Site maps do not represent a comprehensive survey of all public and private underground utilities and other structures present in each Property. Contractor shall perform and maintain utility locations for each Property in the Project Site before commencing excavation.
  2. Ecology, Property Owner and Tenants shall not be responsible for interpretations or conclusions drawn by Contractor from utilities information furnished in this Section, unless otherwise stated in the Contract Documents.
  3. Locations of unidentified utilities may be indicated on site maps.

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**SECTION 36 01 00 – COMMON WORK RESULTS FOR CLEANUP & RESTORATION**

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- F. Unidentified anomalies indicated on the site maps represent unknown features identified by Ecology's environmental services consultant during previous location activities at the site. The depths, dimensions, configurations and conditions of unidentified anomalies has not been determined or verified by Ecology. Contractor shall excavate carefully in these areas. If the cause of the unidentified anomaly is uncovered during Work, Contractor shall promptly notify Ecology.
  
- G. If Contractor's means and method in performance of the Work results in additional exposed soil in a Property that was not originally deemed for removal (i.e. removal of a portion of driveway designated to Remain In Place), Contractor shall remove and replace new area soil to the excavation depth designated for the applicable Decision Unit, prior to restoration of the area, and at no additional cost to Ecology.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.01 – 901 PINE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 901 Pine Street  
**PROPERTY OWNER:** Dorothy Johnson  
**PARCEL NUMBER:** 00438718800101

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	5,072	188
B	12	3,064	114

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Concrete driveway; E3-I3, E4-I4.
- b. Deck; H4-I4, H5-I5.
- c. Water spigot; I4.
- d. Concrete pad; I4.
- e. Mailbox; F2.
  - 1) Contractor shall maintain access to the mailbox during as much of the work as possible.
- f. Stop sign; F2.
- g. Tree west of gate; I2.
- h. Trees in SW corner of front yard; F8-G8.
- i. Trees and shrubs in SE corner of front yard; H7-I7, H8-I8.
- j. Water meter box; K1.

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- k. Fences; entire Decision Unit.
- 2. Remove
  - a. No features identified.
- 3. Remove and Reinstall
  - a. Plastic landscape bed border; H4-H7, G4-G6, F7-H7.
- 4. Remove and Replace in Kind
  - a. Lawn; entire Decision Unit.
    - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**
  - b. Crushed rock path west of landscape bed in Detail Area 4; F4-H4, H4-H7, I7.
    - 1) Restore path with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- B. Detail Area 1
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. Crushed rock pad north of driveway; E3, F2-F3.
    - b. Crushed rock parking area between Pine Street and retaining wall; E4-E8, F4-F8.
      - 1) Restore pad and parking area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- C. Detail Area 2
  - 1. Remain in Place

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**SECTION 36 01 00.01 – 901 PINE STREET**

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- a. Tree at north end of landscape bed; F4.
  - b. Arborvitaes (6); F5-F7.
  - c. Rock retaining wall; F4-F7.
  - d. Other plants and surfacing materials; entire Detail Area.
    - 1) No excavation or restoration work will be completed in this section of the landscape bed.
2. Remove
- a. No features identified.
3. Remove and Reinstall
- a. No features identified.
4. Remove and Replace in Kind
- a. No features identified.
- D. Detail Area 3
- 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Shrubs along crushed rock path; F4-H4.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. Crushed rock path along driveway; F4-H4.
      - 1) Restore path with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- E. Detail Area 4
- 1. Remain in Place
    - a. Rock border, wooden steps, plants, and surfacing material in landscape bed west of deck and house; entire Detail Area.

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- 1) No excavation or restoration work will be completed in this landscape bed.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- F. Detail Area 5
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Two (2) shrubs; G8.
    - b. Rose bush; H8.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Surfacing material; entire Detail Area.
      - 1) Restore landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- G. Detail Area 6
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall

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**SECTION 36 01 00.01 – 901 PINE STREET**

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- a. Wood border; I3.
- 4. Remove and Replace in Kind
  - a. Crushed rock path; I3.
    - 1) Restore path with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**

**3.03 DECISION UNIT B**

A. General Site Features

- 1. Remain in Place
  - a. Tree; K2.
  - b. Fences; entire Decision Unit.
    - 1) There are small gates at I3 and I7.
    - 2) Contractor may remove and reinstall sections of fence as needed for access.
- 2. Remove
  - a. No features identified.
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. Lawn; entire Decision Unit.
    - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**

B. Detail Area 7

- 1. Remain in Place
  - a. Shed; J3.
- 2. Remove
  - a. No features identified.
- 3. Remove and Reinstall
  - a. Wood border; I3-K3.

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4. Remove and Replace in Kind
    - a. Crushed rock path; I3-J3.
      - 1) Restore path with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- C. Detail Area 8
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Yard waste debris (e.g. grass clippings, branches, etc.)
      - 1) Restore area with sod and match grade to surrounding areas.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- D. Detail Area 9
1. Remain in Place
    - a. Deck; K3-L5.
    - b. Concrete steps and slab; K5.
    - c. Crawlspace access; K5.
    - d. Water spigot; K5.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Large river rocks; K3, L3-L5, K5-K7.
      - 1) Remove river rocks along edge of deck in order to excavate as much contaminated soil as possible.
      - 2) Remove soil from river rocks before reinstallation.
      - 3) Backfill area beneath river rocks with common fill.

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- b. Wood border; K3, L3-L5, K5-K7.
- 4. Remove and Replace in Kind
  - a. No features identified.
- E. Detail Area 10
  - 1. Remain in Place
    - a. Hydrangea; L5.
    - b. Blue moon plant; L6.
    - c. Russian sage; L8.
    - d. Maple tree; L8.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. Wood border; K2, L2-L8.
  - 4. Remove and Replace in Kind
    - a. Three (3) shrubs and one (1) small plant at north end of landscape bed; L2-L3.
    - b. Two (2) azaleas, one (1) variegated sage, and twelve (12) daisies; L3-L4.
    - c. Twenty-four (24) Shasta daisies; L5-L6.
    - d. Two (2) cotoneasters and twenty-four (24) Shasta daisies; L7.
    - e. Surfacing material; entire Detail Area.
      - 1) Restore landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**

**3.04 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 3a of **Appendix D.**
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:

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- a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
  - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
  - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 3b of **Appendix D**.
- C. Contractor does not need to provide a kennel for this property.
- D. Property owner is home-bound and access via the driveway shall be maintained at all times in case of emergency.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.02 – 907 PINE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 907 Pine Street  
**PROPERTY OWNER:** David & Dawn Slocum  
**PARCEL NUMBER:** 0043871880500

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	2,147	80
B	12	3,154	117

**3.02 DECISION UNIT A**

- A. General Site Features
  - 1. Remain in Place
    - a. Concrete sidewalk; B4-E4, E5-G5, E6-J6.
    - b. Tree and bark area; B2.
    - c. Tree and bark area; B5.
    - d. Brick walkways; C3-C4.
    - e. Landscape beds and rock borders; B3-B5, C3-C5, D2-D6, E2-E6, F2-F3.
    - f. Water meter box; B6.
    - g. Fences; Entire Decision Unit.
      - 1) There are small gates at J6 and P4.
      - 2) Contractor may remove and reinstall sections of fence as needed for access.
  - 2. Remove

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.02 – 907 PINE STREET**

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- a. Stump; I6.
- b. Pavers; Entire Decision Unit.
  - 1) Contractor will remove and dispose of any pavers not otherwise mentioned in this Section.
- 3. Remove and Reinstall
  - a. Mailbox; A7.
    - 1) Contractor shall provide a temporary mailbox or relocate the existing mailbox during the work.
- 4. Remove and Replace in Kind
  - a. Lawn; entire Decision Unit.
    - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**
- B. Detail Area 1
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor will restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. No features identified.
- C. Detail Area 2
  - 1. Remain in Place
    - a. Plants (2); E3.
      - 1) Contractor will protect the euonymus shrub and the clump of sacred heart bamboo at the north end of Detail Area 2.
  - 2. Remove
    - a. All other plants; Entire Detail Area.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.02 – 907 PINE STREET**

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3. Remove and Reinstall
    - a. Rock border; E3-E4.
  4. Remove and Replace in Kind
    - a. Surfacing material; entire Detail Area.
      - 1) Restore landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- D. Detail Area 3
1. Remain in Place
    - a. Sacred heart bamboo; E4.
    - b. Euonymus tree; E5.
    - c. Rosemary bush; G5.
    - d. Water spigots (2); F5, J5.
  2. Remove
    - a. All other plants; Entire Detail Area.
  3. Remove and Reinstall
    - a. Brick pad; E5-G5.
  4. Remove and Replace in Kind
    - a. Surfacing material; entire Detail Area.
      - 1) Restore landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- E. Detail Area 4
1. Remain in Place
    - a. Weeping cherry tree; H6.
  2. Remove
    - a. All other plants; Entire Detail Area.
  3. Remove and Reinstall
    - a. No features identified.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.02 – 907 PINE STREET**

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4. Remove and Replace in Kind
  - a. No features identified.

**3.03 DECISION UNIT B**

A. General Site Features

1. Remain in Place
  - a. Concrete sidewalk; J6, K4-K6, L4-N4.
  - b. Shed; N6-N7, O6-O7.
  - c. Crawlspace access; J3.
    - 1) Contractor shall provide and install a metal well (similar to the one at J5) prior to backfilling to avoid blocking this crawlspace access.
  - d. Crawlspace access; J4.
    - 1) Contractor shall provide and install a metal well (similar to the one at J5) prior to backfilling to avoid blocking this crawlspace access.
  - e. Crawlspace access and metal well; J5.
  - f. Tree; F2.
  - g. Fences; Entire Decision Unit.
    - 1) There are small gates at J6 and P4.
    - 2) Contractor may remove and reinstall sections of fence as needed for access.
2. Remove
  - a. Metal gate posts and concrete bases (2); J2-J3.
    - 1) Contractor shall remove these during excavation if it is possible to do so without damaging the adjacent house or fence.
3. Remove and Reinstall
  - a. Pavers; J4-K4.
  - b. Pavers; Entire Decision Unit.
    - 1) Contractor will remove and dispose of any pavers not otherwise mentioned in this Section.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.02 – 907 PINE STREET**

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- c. Large rock; M5.
- 4. Remove and Replace in Kind
  - a. Lawn; entire Decision Unit.
    - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**
- B. Detail Area 5
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor will restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. No features identified.
- C. Detail Area 6
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor will restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. No features identified.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.02 – 907 PINE STREET**

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**3.04 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 4a of **Appendix D**.
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 4b of **Appendix D**.
- C. Contractor shall provide a kennel for this property.
- D. Excavation and restoration work at this property should be completed within 45 calendar days of NTP.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.03 – 909 PINE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 909 Pine Street  
**PROPERTY OWNER:** Gerry Donathan & Jennifer McKinney  
**PARCEL NUMBER:** 00438718800700

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	5,942	220

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. CRZ of tree on adjacent property; N7-O7.
  - 1) Contractor shall remove surface material where possible in Inner CRZ and restore area with landscape bark.
- b. Hot tub slab; L5-L6, M5-M6.
- c. Electrical conduit; between hot tub slab and SE corner of house.
  - 1) Property owner believes conduit is 36" below grade, but Contractor should dig carefully in this area.
- d. Water meter box; B6.
- e. Fences; Entire Decision Unit.
  - 1) There are large gates at G6 and P5/P6.
  - 2) Contractor may remove and reinstall sections of fence as needed for access.

2. Remove

- a. Grass strip between fence and alley; P2-P7.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.03 – 909 PINE STREET**

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- 1) Contractor will restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**
- B. Detail Area 1
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Mailbox; A2.
    - b. Decorative rocks; A2.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area
      - 1) Contractor will restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- C. Detail Area 2
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Trees (2); B3, B4.
    - b. Decorative rocks; Entire Detail Area.
    - c. Landscape bed material; Entire Detail Area.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.03 – 909 PINE STREET**

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- 1) Contractor will restore this entire area with sod per **SECTION 32 92 23 – SODDING.**
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- D. Detail Area 3
1. Remain in Place
    - a. Rock wall; C2-C4.
    - b. Landscape bed material and plants within rock wall; C2-C4.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Concrete block garden beds; C2-C4, D2-D4.
      - 1) Contractor shall remove and reinstall the concrete blocks in order to excavate beneath them.
      - 2) Contractor shall replace the filter fabric in each bed after reinstallation.
      - 3) Contractor shall not replace the topsoil inside the garden beds.
  4. Remove and Replace in Kind
    - a. Pea gravel surrounding garden beds; C2-C4, D2-D4.
      - 1) Contractor shall adjust the grade of sod area at the NE corner of Detail Area 3 to reduce the existing elevation difference between the pea gravel and the sod.
- E. Detail Area 4
1. Remain in Place
    - a. Crawlspace access and metal well; F5.
  2. Remove

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.03 – 909 PINE STREET**

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- a. All plants west and south of steps and house; E3-E5, F3-F5.
- 3. Remove and Reinstall
  - a. Decorative rocks and lights; Entire Detail Area.
  - b. Wood border; F4-F5.
- 4. Remove and Replace in Kind
  - a. Plants north of steps; E2-E3, F2-F3.
    - 1) Plants include: 4 hostas, 1 azalea, 1 orange honeysuckle, 1 sword fern, 1 variegated dogwood, 1 kinnickinnick, 1 Alaska weeping cedar, and 1 pollinator (variety unknown).
  - b. Surfacing material; Entire Detail Area.
    - 1) Contractor shall restore this landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
  - c. River rock path; E2-E3.
- F. Detail Area 5
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Crushed rock driveway; A5-G5, A6-G6, B7-F7.
      - 1) Contractor shall restore driveway area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. Plants; C6-E6, F7.
      - 1) Plants include: 1 ocean spray, 1 currant, 1 mock orange, 1 snowberry, and 1 evergreen huckleberry.
    - b. Surfacing material in landscape bed; A6-F6, B7-F7.
      - 1) Contractor shall restore entire Detail Area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- G. Detail Area 6

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.03 – 909 PINE STREET**

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1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Crushed rock area; G5-K5, G6-K6, G7-K7.
      - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
    - b. Pea gravel area; K5-K7, L5-L7.
      - 1) Contractor shall restore this entire area with pea gravel per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- H. Detail Area 7
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire Detail Area with common fill per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- I. Detail Area 8
1. Remain in Place
    - a. No features identified.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.03 – 909 PINE STREET**

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2. Remove
    - a. Tree; M4.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- J. Detail Area 9
1. Remain in Place
    - a. Wood and wire fence; M2-M4, N4-P4.
      - 1) Contractor may remove and reinstall a section of the fence as needed for access.
  2. Remove
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire area with pea gravel per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  3. Remove and Reinstall
    - a. Decorative rocks; M3-M4.
      - 1) Contractor may remove and reinstall the decorative rocks along the fence line as needed during excavation.
  4. Remove and Replace in Kind
    - a. No features identified.

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 5a of **Appendix D.**
1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.03 – 909 PINE STREET**

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- a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
  - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
  - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 5b of **Appendix D**.
- C. Contractor shall provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.04 – 929 PINE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 929 Pine Street  
**PROPERTY OWNER:** Brian & Maryanne Coffman  
**PARCEL NUMBER:** 00438718801301

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	5,218	193

**3.02 DECISION UNIT A**

- A. General Site Features
  - 1. Remain in Place
    - a. Fire hydrant; C2.
    - b. Concrete sidewalk; B5-F5.
    - c. Porch and steps; F5-F6.
    - d. Paver patio; J6-J7, K6-K7.
    - e. Concrete sidewalk; K6-L6.
    - f. Water spigot; K6.
    - g. Large tree in adjacent property; M4.
      - 1) Soil removal may be limited in the Inner CRZ of this tree.
    - h. Water meter box; C7.
    - i. Gas meter; G7.
    - j. Fences; Entire Decision Unit.
      - 1) There are small gates at B5 and L6.

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**SECTION 36 01 00.04 – 929 PINE STREET**

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- 2) Contractor may remove and reinstall sections of fence as needed for access.
  2. Remove
    - a. Stump; H3.
  3. Remove and Reinstall
    - a. Pavers; A5-B5.
    - b. Mailbox; A4.
      - 1) Contractor shall provide a temporary mailbox or relocate the existing mailbox during the work.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**
    - b. Tree; E2.
      - 1) Tree will be Replaced in Kind and relocated to C4.
    - c. White rose bush; F7.
- B. Detail Area 1
1. Remain in Place
    - a. Water spigot; F5.
  2. Remove
  3. Remove and Reinstall
  4. Remove and Replace in Kind
    - a. Pink rose bush; F4.
      - 1) Contractor shall backfill a 3 foot diameter area around the rose bush with topsoil.
    - b. River rock; Entire Detail Area.
      - 1) Contractor shall restore this entire area with river rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- C. Detail Area 2

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.04 – 929 PINE STREET**

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1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- D. Detail Area 3
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 6a of **Appendix D.**
  1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:

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**SECTION 36 01 00.04 – 929 PINE STREET**

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- a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
  - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
  - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 6b of **Appendix D**.
- C. Contractor does not need to provide a kennel for this property.
- D. Excavation and restoration work at this property should be completed within 45 calendar days of NTP.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.05 – 932 MAPLE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 932 Maple Street  
**PROPERTY OWNER:** Robert Franks  
**PARCEL NUMBER:** 00438718801800

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	3,404	126
B	12	3,697	137

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Stop sign on metal pole; O6.
- b. Street sign on metal pole; N8.
- c. Mailboxes; P2.
  - 1) Contractor shall maintain access to the mailboxes during as much of the work as possible.
- d. Garage; H2-H5, I2-I5, J2-J5, K2-K5, L2-L5.
- e. Spigot; J5.
- f. Tree; N2.
- g. Tree, O2.
- h. Water meter box; P4.
- i. Water line; H5-N5, N4-P4.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.05 – 932 MAPLE STREET**

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- 1) Property owner believes that the water line is very shallow. Contractor shall use hand tools to locate the water line prior to excavating in this area.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING**.
      - 2) Contractor shall adjust grade along the east and north sides of the garage during backfill to eliminate the existing depression between the yard and the garage.
- B. Detail Area 4
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Trees; Entire Detail Area.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.

**3.03 DECISION UNIT B**

- A. General Site Features
1. Remain in Place
    - a. Street sign on metal pole; B6.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.05 – 932 MAPLE STREET**

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- b. Concrete sidewalk; D5-D6, E6.
    - 1) Contractor shall maintain access to the house via the door at D5.
  - c. Concrete steps; C3-C4.
  - d. Crawlspace access and concrete well; D6.
  - e. Water line; D5-H5.
    - 1) Property owner believes that the water line is very shallow. Contractor shall use hand tools to locate the water line prior to excavating in this area.
- 2. Remove
    - a. Plant; D6.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. Arborvitae (7); E1-G1.
      - 1) Contractor shall relocate replacement arborvitae to Detail Area 4, along the property line (F7-K7).
    - b. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING**.
      - 2) Contractor shall adjust grade north and east of Detail Area 2 during backfill to reduce the elevation change between the yard and the paver pad.
- B. Detail Area 1
- 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. No features identified.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.05 – 932 MAPLE STREET**

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4. Remove and Replace in Kind
    - a. Crushed rock driveway; A2-E2, A3-H3, F4-H4.
      - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- C. Detail Area 2
1. Remain in Place
    - a. Water spigot; D5.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Concrete pavers; Entire Detail Area.
  4. Remove and Replace in Kind
    - a. No features identified.
- D. Detail Area 3
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Concrete sidewalk; D7-E7.
      - 1) Contractor shall replace this section of the sidewalk following excavation. Sidewalk shall be extended to property line and shall match the width of the remaining sidewalk section.
- E. Detail Area 4
1. Remain in Place

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- a. No features identified.
- 2. Remove
  - a. Trees; Entire Detail Area.
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. No features identified.

**3.04 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 7a of **Appendix D**.
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 7b of **Appendix D**.
- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.06 – 928 MAPLE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 928 Maple Street  
**PROPERTY OWNER:** Aaron Wyeth  
**PARCEL NUMBER:** 00438718802000

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	4,885	181

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Large trees (2) in adjacent property; I2, O2.
  - 1) Contractor shall not remove existing grass within Inner CRZ of tree in I2.
- b. Concrete sidewalk and steps; L4-P4, L5-P5.
- c. Mailboxes on property line; O7.
  - 1) Contractor shall provide temporary mailboxes or relocate the existing mailboxes during the work.
- d. Water spigots (2); K4, L4.
- e. Crawlspace access and concrete pad; K4.
- f. Crawlspace access (2); E3, I6.
- g. Concrete driveway; A5-B5, A6-B6.
- h. Garage; C5-E5, C6-E6.
- i. Concrete pad; E5.

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**SECTION 36 01 00.06 – 928 MAPLE STREET**

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- j. Water meter box; O4.
  - k. Unknown pipe; J4.
    - 1) Pipe sticks out of the ground near house. Contractor shall hand dig in this area to determine pipe pathway beneath ground surface prior to excavating in this area.
  - l. Fences; Entire Decision Unit.
    - 1) There are small gates at E5, F2, and K3.
    - 2) Contractor may remove and reinstall sections of fence as needed for access.
2. Remove
- a. Stump; L7.
  - b. Concrete debris; K3-L3.
    - 1) Contractor shall remove any concrete debris encountered within the 12 inch excavation depth in this area.
  - c. Old fence posts and concrete; H7-O7.
3. Remove and Reinstall
- a. No features identified.
4. Remove and Replace in Kind
- a. Lawn; entire Decision Unit.
    - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING**.
    - 2) Contractor shall restore 1” edging gap along the sidewalk and steps in the front yard.
    - 3) Contractor shall ensure that no gaps larger than 1 inch exist between finish surface elevations and the bottom of all fences.
- B. Detail Area 1
- 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.

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**SECTION 36 01 00.06 – 928 MAPLE STREET**

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3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- C. Detail Area 2
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Concrete block border; K2-K3.
    - b. Paver path and doghouse base; K2-K3.
    - c. Doghouse; K2.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire area with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- D. Detail Area 3
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind

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**SECTION 36 01 00.06 – 928 MAPLE STREET**

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- a. River rock; Entire Detail Area.
  - 1) Contractor shall restore a 1 foot wide area with river rocks per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 2) Contractor shall adjust grade at west end of Detail Area 3 to match the existing adjacent sod elevation.
- E. Detail Area 4
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Surfacing material beneath house overhang; F6-G6.
      - 1) Contractor shall restore a 1 foot wide area with river rocks per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 3. Remove and Reinstall
    - a. Concrete pavers; E5-E6.
      - 1) Contractor shall backfill entire paver area (bounded by garage to the west, house to the east, gate to the north, and corner of the house to the south) with common fill per **SECTION 31 23 23 – FILL.**
      - 2) Contractor shall adjust the grade in this area so that pavers are level and top of the pavers is no more than 1” below the bottom of the gate.
  - 4. Remove and Replace in Kind
    - a. No features identified.
- F. Detail Area 5
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. Concrete block fire pit; D3-D4.
      - 1) Property owner notes that concrete blocks are glued together.

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- 2) Contractor shall backfill entire footprint of fire pit with common fill.
- 4. Remove and Replace in Kind
  - a. No features identified.
- G. Detail Area 6
  - 1. Remain in Place
    - a. Wood pile; Entire Detail Area.
      - 1) Contractor shall not excavate in this area.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. No features identified.

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 8a of **Appendix D**.
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 8b of **Appendix D**.

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**SECTION 36 01 00.06 – 928 MAPLE STREET**

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- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.07 – 926 MAPLE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 926 Maple Street  
**PROPERTY OWNER:** Heather Young  
**PARCEL NUMBER:** 00438718802200

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	5,505	204

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Concrete sidewalk; M4-P4.
- b. Large tree; I7.
- c. Wooden arbor; H7-I7.
- d. Wooden steps; H3-H4.
- e. Water meter box; O5.
- f. Fences; Entire Decision Unit.
  - 1) Property owner does not own fences along north and south property boundaries.
  - 2) There is a small gate at J7 and a large gate at B5/B6.
  - 3) Contractor may remove and reinstall sections of fence along west property boundary as needed for access.

2. Remove

- a. Broken concrete slab debris; B2-D2, B3-D3.

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**SECTION 36 01 00.07 – 926 MAPLE STREET**

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- 1) Contractor shall restore this area with sod per **SECTION 32 92 23 – SODDING** and shall match the elevation and grade to the surrounding areas.
  - b. Garden bed; G2-G3, H2-H3.
  - c. Abandoned electrical conduit; F3.
    - 1) Contractor shall cap the electrical conduit and terminate it below ground surface prior to backfill.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod per **SECTION 32 92 23 – SODDING**.
    - b. Fruit trees (3); E7-E9.
      - 1) Trees are two apple trees and one Rainier cherry tree.
      - 2) Contractor shall relocate new trees five (5) feet away from the fence.
- B. Detail Area 1
1. Remain in Place
    - a. Lilac tree; O2.
  2. Remove
    - a. Large river rocks; Entire Detail Area.
    - b. Yucca plants (2); M3.
  3. Remove and Reinstall
    - a. Brick border; O2-O4.
    - b. Stone walkway and patio; M3-M4, N3.
    - c. Brick pavers; L3.
  4. Remove and Replace in Kind
    - a. Yucca Plants (3); O3-O4.

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**SECTION 36 01 00.07 – 926 MAPLE STREET**

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- 1) Contractor shall replace these 3 plants with 3 lavender plants.
  - b. All other living plants; Entire Detail Area.
    - 1) Plants include 2 red hot fire pokers, 2 daylilies, and 2 tiger lilies.
- C. Detail Area 2
1. Remain in Place
    - a. Large tree; O7.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Brick border; N4-N6, O5-O6.
  4. Remove and Replace in Kind
    - a. Japanese maple tree; N5.
    - b. All other living plants; Entire Detail Area.
    - c. Surfacing material; M6-M7, N4-N7, O4-O7.
      - 1) Contractor shall restore the area between the brick borders as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- D. Detail Area 3
1. Remain in Place
    - a. Large stump; L7.
      - 1) Contractor shall not establish a CRZ around the stump and shall remove as much soil as possible in this area.
    - b. Utility pole; K7.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Brick border; L5-L6, M6.
    - b. Brick pavers; J7-K7.

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**SECTION 36 01 00.07 – 926 MAPLE STREET**

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4. Remove and Replace in Kind
  - a. Japanese Andromeda; L5.
  - b. All other living plants; Entire Detail Area.
    - 1) Plants include 2 irises and 3 lilies along the front of the house and 2 shrubs east of the large stump.
  - c. Surfacing material; Entire Detail Area.
    - 1) Contractor shall restore the entire area south and west of the brick border as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- E. Detail Area 4
  1. Remain in Place
    - a. Gas meter; K2.
    - b. Water spigot; H3.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Concrete pavers; I2-J2.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- F. Detail Area 5
  1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Brick patio; G3-G4, H3-H6.

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**SECTION 36 01 00.07 – 926 MAPLE STREET**

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- b. Wood lattice; H4-H6.
  - 1) Contractor shall remove the lattice as necessary to remove soil from the crawlspace/storage area along the west side of the house.
- 4. Remove and Replace in Kind
  - a. Crawlspace/storage area; I4-I6.
    - 1) Contractor shall remove as much soil as possible from this area beneath the back of the house.
    - 2) Contractor shall restore the area with common fill per **SECTION 31 23 23 – FILL.**
- G. Detail Area 6
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. Brick fire pit; E5-F5.
      - 1) Contractor shall backfill the footprint of the brick fire pit with common fill per **SECTION 31 23 23 – FILL.**
  - 4. Remove and Replace in Kind
    - a. No features identified.
- H. Detail Area 7
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Surfacing material between fence and alley; Entire Detail Area.
      - 1) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 3. Remove and Reinstall

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.07 – 926 MAPLE STREET**

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- a. No features identified.
- 4. Remove and Replace in Kind
  - a. No features identified.

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 9a of **Appendix D**.
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 9b of **Appendix D**.
- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.08 – 916 MAPLE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 916 Maple Street  
**PROPERTY OWNER:** Ken & Devin Greenway  
**PARCEL NUMBER:** 00438718802600

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	4,913	182

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Mailboxes; O5.
  - 1) Contractor shall provide temporary mailboxes or relocate the existing mailboxes during the work.
- b. Sheds (2); F2-F3, G2-G3.
- c. Concrete sidewalks; D4-D5, E5-E6, F6-M6, F7-M7, M4, M5-P5.
- d. Stump; F3.
- e. Water meter box; O5.
- f. Private waterline; D6-I6.
  - 1) Waterline is likely within excavation depth. Contractor shall use hand tools to locate waterline prior to excavating in this area.
- g. Sewer inspection port; H5.
  - 1) Inspection port is visible at ground surface. Contractor shall use hand tools to locate sewer line prior to excavating in this area.
- h. Houses on block footings (2); Entire Decision Unit.

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**SECTION 36 01 00.08 – 916 MAPLE STREET**

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- 1) Contractor shall not excavate within 6” around the perimeter of each houses. Contractor shall maintain a 1:1 slope away from the edge of the 6” buffer when excavating.
  - 2) Contractor shall extend restoration into 6” buffer area to achieve a uniform final appearance (e.g., landscape bark shall be installed in entire bed, including 6” buffer area.)
    - i. Fences; Entire Decision Unit.
      - 1) Property owner does not own fences along north and south property boundaries.
      - 2) There is a small gate at F6/F7.
      - 3) Contractor may remove and reinstall sections of fence between two houses (F2-F7) as needed for access.
2. Remove
    - a. Stump; F4.
    - b. Stumps; N4, N6.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Gravel driveway and parking area; D4-D5, E5, B6-E6, B7-F7.
      - 1) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
    - b. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**
- B. Detail Area 1
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Stump; N2.
  3. Remove and Reinstall

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- a. No features identified.
- 4. Remove and Replace in Kind
  - a. Plants (3); M2-N2.
  - b. Surfacing material; Entire Detail Area.
    - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- C. Detail Area 2
  - 1. Remain in Place
    - a. Water spigot; L6.
      - 1) Spigot is located near ground surface.
  - 2. Remove
    - a. All plants; Entire Detail Area.
  - 3. Remove and Reinstall
    - a. Wooden steps; I6.
      - 1) Contractor shall remove and reinstall the wooden steps in order to excavate beneath them.
  - 4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- D. Detail Area 3
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. Concrete brick border; F3.
  - 4. Remove and Replace in Kind

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.08 – 916 MAPLE STREET**

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- a. All living plants; Entire Detail Area.
    - 1) Plants include 3 sword ferns, 1 azalea, and 2 hostas.
  - b. Surfacing material; Entire Detail Area.
    - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- E. Detail Area 4
- 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Plant and compost debris; Entire Detail Area.
      - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
  - 3. Remove and Reinstall
    - a. Brick Border; F7.
  - 4. Remove and Replace in Kind
    - a. No features identified.
- F. Detail Area 5
- 1. Remain in Place
    - a. Water spigot; D5.
    - b. Plant; D2.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. Rock border; D2-F2, D3-D6.
  - 4. Remove and Replace in Kind
    - a. Shrub; D4.
    - b. Surfacing material; Entire Detail Area.

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**SECTION 36 01 00.08 – 916 MAPLE STREET**

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- 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- 2) Along the north property line, contractor shall increase the elevation of the landscape bed and adjust the grade as needed to eliminate the gap between the bed and the fence.

G. Detail Area 6

1. Remain in Place
  - a. No features identified.
2. Remove
  - a. Plants and surfacing material; Entire Detail Area.
    - 1) Contractor shall attempt to remove as much soil as possible in the narrow area between the house and the north property fence.
    - 2) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
3. Remove and Reinstall
  - a. No features identified.
4. Remove and Replace in Kind
  - a. No features identified.

H. Detail Area 7

1. Remain in Place
  - a. No features identified.
2. Remove
  - a. No features identified.
3. Remove and Reinstall
  - a. No features identified.
4. Remove and Replace in Kind
  - a. Surfacing material; Entire Detail Area.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.08 – 916 MAPLE STREET**

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- 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 10a of **Appendix D**.
  1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 10b of **Appendix D**.
- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.09 – 902 MAPLE STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 902 Maple Street  
**PROPERTY OWNER:** Khiet Huynh  
**PARCEL NUMBER:** 00438718803300

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	2,353	87
B	12	3,226	119

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Rock wall; N2, O3, P4-P8, N5-O5, O8.
- b. Concrete block wall; O4, N4-N5, O5, P5-P6, O7.
  - 1) Contractor shall not excavate between block wall and rock wall.
- c. Utility pole; B2.
- d. Downspouts; Entire Decision Unit.
  - 1) Downspouts are connected below grade to an unknown drainage system. Contractor shall hand dig to locate associated piping prior to excavating near downspouts.
- e. Asphalt driveway; B5-B7, C5-C7, D5-D7.
- f. Gas meter; M3.
- g. Fences; Entire Decision Unit.
  - 1) There is a small gate at M6 and a large gate at E6/E7.
  - 2) Contractor may remove and reinstall sections of fence as needed for access.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.09 – 902 MAPLE STREET**

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2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod per **SECTION 32 92 23 – SODDING**.
    - b. Red rose bush; N6.
- B. Detail Area 1
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. All plants within property boundary; Entire Detail Area.
      - 1) Contractor shall remove and not replace all plants which are entirely within the property boundary.
      - 2) Contractor shall not remove plants if removal will cause damage to plants belonging to adjacent property owner.
      - 3) Ecology representative will identify which plants shall be removed after the property corners have been surveyed.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- C. Detail Area 2
1. Remain in Place
    - a. Rhododendron; N4.

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**SECTION 36 01 00.09 – 902 MAPLE STREET**

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- b. Arborvitaes (7); N3-O3, O4.
- c. Large tree; M2.
- 2. Remove
  - a. No features identified.
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. No features identified.
- D. Detail Area 3
  - 1. Remain in Place
    - a. Small arborvitaes (10); J2-L2.
    - b. Street sign on metal pole; C2.
  - 2. Remove
    - a. Plants; Entire Detail Area.
      - 1) Contractor shall restore entire area with sod per **SECTION 32 92 23 – SODDING**.
      - 2) Due to the steep slope in this area, hydroseeding will be permitted per **SECTION 32 92 19.16 – HYDROSEEDING** prior to October 1.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. No features identified.
- E. Detail Area 7
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove

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- a. Surfacing material; Entire Detail Area.
  - 1) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. No features identified.

**3.03 DECISION UNIT B**

A. General Site Features

- 1. Remain in Place
  - a. Shed; E3-E4, F3-F4.
  - b. Wood stairs; J6.
  - c. Downspouts; Entire Decision Unit.
    - 1) Downspouts are connected below grade to an unknown drainage system. Contractor shall hand dig to locate associated piping prior to excavating near downspouts.
- 2. Remove
  - a. No features identified.
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. Lawn; entire Decision Unit.
    - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING.**

B. Detail Area 4

- 1. Remain in Place
  - a. Deck footings; Entire Detail Area.
- 2. Remove

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- a. Surfacing material outside basement door; Entire Detail Area.
  - 1) A portion of this Detail Area is beneath the deck. Contractor shall remove as much soil as possible between the base of the stairs and the doorway.
  - 2) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. No features identified.
- C. Detail Area 5
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Garden bed; H2-H3, I2-I3.
      - 1) Garden bed is surrounded by concrete blocks (approximately 36). Contractor shall dispose of these blocks.
    - b. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind
    - a. No features identified.
- D. Detail Area 6
  - 1. Remain in Place
    - a. Tree; D3.
  - 2. Remove

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**SECTION 36 01 00.09 – 902 MAPLE STREET**

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- a. Plants, B2-B3, C2.
- b. Surfacing material; Entire Detail Area.
  - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- 3. Remove and Reinstall
  - a. No features identified.
- 4. Remove and Replace in Kind
  - a. No features identified.

**3.04 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 11a of **Appendix D**.
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 11b of **Appendix D**.
- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.10 – 2910 9<sup>TH</sup> STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 2910 9<sup>th</sup> Street  
**PROPERTY OWNER:** Son Yon Ivy  
**PARCEL NUMBER:** 00438718800100

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	12	3,368	125

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Utility pole; C7.
- b. City sign on metal pole; C3.
- c. City sign on metal pole; D2.
- d. Concrete sidewalk; C4-G4.
- e. Concrete driveway; J2-L2.
- f. Crawlspace access; L6.
- g. Gas meter; L4.
- h. Water meter box; C4.
- i. Unknown pipe; L4.
  - 1) Pipe sticks out of the ground near house. Contractor shall hand dig in this area to determine pipe pathway beneath ground surface prior to excavating in this area.
- j. Fences; Entire Decision Unit.

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**SECTION 36 01 00.10 – 2910 9<sup>TH</sup> STREET**

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- 1) Property owner does not own fence along west property boundary.
  - 2) There are small gates at D4, J2, and H7.
  - 3) Contractor may remove and reinstall sections of chain-link fence along north and east property boundaries as needed for access.
2. Remove
    - a. Plants (2 viburnums); D4.
    - b. Shrub; D6.
    - c. Metal post in concrete; M7.
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod in accordance with **SECTION 32 92 23 – SODDING**.
- B. Detail Area 1
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Plants; Entire Detail Area.
  3. Remove and Reinstall
    - a. Concrete block border.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- C. Detail Area 2

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**SECTION 36 01 00.10 – 2910 9<sup>TH</sup> STREET**

---

1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Concrete pavers; Entire Detail Area.
    - b. Wood border; H7-L7.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- D. Detail Area 3
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Plant; G6.
  3. Remove and Reinstall
    - a. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
  4. Remove and Replace in Kind
    - a. Red rose bush; G4.
      - 1) Contractor shall install replacement plant at the west end of the landscape bed.
- E. Detail Area 4
1. Remain in Place
    - a. No features identified.

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**SECTION 36 01 00.10 – 2910 9<sup>TH</sup> STREET**

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2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Wood lattice; G4-G7.
      - 1) Contractor may remove and reinstall the lattice as needed for access.
  4. Remove and Replace in Kind
    - a. Surfacing material; Entire Detail Area.
      - 1) This detail area is a storage crawlspace beneath the deck. Contractor shall remove as much soil as possible.
      - 2) Contractor shall restore the entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
- F. Detail Area 5
1. Remain in Place
    - a. Water spigot; G4.
  2. Remove
    - a. Plants; Entire Detail Area.
  3. Remove and Reinstall
    - a. Concrete pavers (7); F3-F4.
    - b. Wood border; G2-G4, H2-J2.
  4. Remove and Replace in Kind
    - a. Gravel path; G2-G4, H2-J2.
      - 1) Contractor shall restore the path with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
    - b. Landscape bed east of house; G2-I2.
      - 1) Contractor shall restore the entire area as a landscape bed with topsoil only per **SECTION 31 23 23 – FILL.**
- G. Detail Area 6
1. Remain in Place

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**SECTION 36 01 00.10 – 2910 9<sup>TH</sup> STREET**

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- a. No features identified.
2. Remove
  - a. Surfacing material; Entire Detail Area.
    - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
3. Remove and Reinstall
  - a. No features identified.
4. Remove and Replace in Kind
  - a. No features identified.

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 12a of **Appendix D.**
  1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 12b of **Appendix D.**
- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION  
SECTION 36 01 00.11 – 3002 BUTLER STREET**

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**PART 1      GENERAL**

**1.01 PROPERTY INFORMATION**

**PROPERTY ADDRESS:** 3002 Butler Street  
**PROPERTY OWNER:** Brian & Robin McCormick  
**PARCEL NUMBER:** 00396600000100

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION**

**3.01 SPECIFIED EXCAVATION/REMOVAL DEPTHS**

<u>DECISION UNIT</u>	<u>REMOVAL DEPTH (in)</u>	<u>APPROXIMATE REMOVAL AREA (sf)</u>	<u>APPROXIMATE REMOVAL VOLUME (cy)</u>
A	24	4,628	343

**3.02 DECISION UNIT A**

A. General Site Features

1. Remain in Place

- a. Asphalt driveway; D1-F1, D2-F2, D3-E3.
- b. Concrete steps; F3.
- c. Tree; G7.
  - 1) Contractor shall not remove sod from the Inner CRZ of this tree.
- d. Tree; J5.
  - 1) Contractor shall restore a 3 foot radius area around this tree with landscape bark per **SECTION 31 23 23 – FILL**.
- e. Tree; L4.
  - 1) Contractor shall restore a 3 foot radius area around this tree with landscape bark per **SECTION 31 23 23 – FILL**.
- f. Trees (2); L2-L3.
  - 1) Contractor shall restore the bark area around these trees in the same size and shape it is prior to excavation.
- g. Fences; Entire Decision Unit.
  - 1) There is a small gate at G6.

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
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- 2) Contractor may remove and reinstall sections of fence along west and south property boundaries as needed for access.
  2. Remove
    - a. Stump; I6.
    - b. Sod parking area; E6-F6.
      - 1) Contractor shall restore a 10'x15' parking area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**
  3. Remove and Reinstall
    - a. Brick pavers around window well; I4.
      - 1) Contractor may remove and reinstall these bricks during excavation as needed.
  4. Remove and Replace in Kind
    - a. Lawn; entire Decision Unit.
      - 1) Unless designated otherwise, all locations are to be restored with sod per **SECTION 32 92 23 – SODDING.**
    - b. Landscape bark along fences and house; Entire Decision Unit.
      - 1) Contractor shall restore a 12 inch section along both sides of the west fence, the west side of the east fence, and the south side of the house with landscape bark per **SECTION 31 23 23 – FILL.**
- B. Detail Area 1
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Stump; F8.
    - b. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore the entire area with sod per **SECTION 32 92 23 – SODDING** and shall match the grade to surrounding areas.
  3. Remove and Reinstall

**DIVISION 36 – INDIVIDUAL PROPERTY CLEANUP & RESTORATION**  
**SECTION 36 01 00.11 – 3002 BUTLER STREET**

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- a. Decorative rocks; Entire Detail Area.
  - 1) Contractor shall reinstall rocks along the northwest corner of the property at the edge of the street.
- 4. Remove and Replace in Kind
  - a. No features identified.
- C. Detail Area 2
  - 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. Pea gravel; E5-F5.
      - 1) Contractor will restore a 1 foot strip west of the small retaining wall as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
  - 3. Remove and Reinstall
    - a. Wood retaining wall; E5-F5.
    - b. Rock border; F5-F6.
    - c. Concrete pavers; F6-G6.
  - 4. Remove and Replace in Kind
    - a. Plants; Entire Detail Area.
      - 1) Plants include 1 blue-colored ground cover, 1 red-colored ground cover, 3 hens-and-chicks, and 8 bulbs.
    - b. Landscape bed; F5-G5, F6-G6.
      - 1) Contractor shall restore this area as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
- D. Detail Area 3
  - 1. Remain in Place
    - a. Concrete block wall; E3, D3-D5.
      - 1) Contractor may remove and reinstall concrete blocks during excavation as needed.
    - b. Concrete block window well; F4.

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**SECTION 36 01 00.11 – 3002 BUTLER STREET**

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- 1) Contractor may remove and reinstall concrete blocks during excavation as needed.
- c. Rhododendron; E3.
- d. Rhododendron; F3.
- e. Rhododendron; E5.
- f. Fuschia; F5.
- g. Shrub; F5.
2. Remove
  - a. Brick walkway; F3-F5.
3. Remove and Reinstall
  - a. Brick borders; E3, E5.
  - b. Wood border around planter; E5-F5.
  - c. Rock border; F5.
4. Remove and Replace in Kind
  - a. Plants along Butler Street; E3-E5.
    - 1) Plants include 5 tall flowering bulbs, 6 grassy plants, 1 cotoneaster (west of flag pole), and 5 red irises (east of flag pole).
  - b. Plants near window well; F4.
    - 1) Plants include 5 bulbs, 1 azalea, 1 lily, and 1 flowering ground cover.
  - c. Plants in and adjacent to wood planter; E5-F5.
    - 1) Plants include 5 bulbs and 2 red-colored ground cover.
  - d. Plants north of deck; E3.
    - 1) Plants include 1 pink rose bush and 10 red irises.
  - e. Surfacing material; Entire Detail Area.
    - 1) Contractor shall restore all landscape beds around the perimeter of this area with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**

E. Detail Area 4

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1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. Concrete slab; H5-H6.
      - 1) Slab is approximately 6'x9'x3".
    - b. Concrete pavers; Entire Detail Area.
      - 1) Contractor shall remove and set aside for property owner any pavers in this area.
    - c. Landscape bed; H5-I5.
    - d. Bark strip along fence; G6-H6.
    - e. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire Detail Area with common fill per **SECTION 31 23 23 – FILL.**
  3. Remove and Reinstall
    - a. No features identified.
  4. Remove and Replace in Kind
    - a. No features identified.
- F. Detail Area 5
1. Remain in Place
    - a. No features identified.
  2. Remove
    - a. No features identified.
  3. Remove and Reinstall
    - a. Concrete pavers; Entire Detail Area.
    - b. Surfacing material; Entire Detail Area.
      - 1) Contractor shall restore this entire area with 5/8-minus crushed rock per **SECTION 32 15 00 – AGGREGATE SURFACING.**

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- 2) Note that this area is a dirt/gravel floored garage located beneath the deck. Clearance at the entrance is approximately 6' high and 15' wide.
4. Remove and Replace in Kind
  - a. No features identified.
- G. Detail Area 6
  1. Remain in Place
    - a. Water spigot; I4.
  2. Remove
    - a. Concrete pavers at base of steps; J3.
      - 1) Contractor shall restore this area with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**
  3. Remove and Reinstall
    - a. Rock wall; I3-K3.
      - 1) Contractor may remove large rocks/concrete chunks from the rock walls as needed during excavation.
      - 2) Contractor shall maintain a 1:1 slope when excavating near the rock walls.
    - b. Paver steps; J3.
    - c. Plastic pond; K3.
      - 1) Contractor shall drain and remove the pond prior to excavation and reinstall it (empty) during backfill.
      - 2) Property owner will disconnect and remove power supply prior to the start of work.
    - d. Decorative rocks and pavers; J3-K3.
  4. Remove and Replace in Kind
    - a. Plants; I3-I4.
      - 1) Contractor shall replace 3 plants in the upper bed between the house and the paver steps.
    - b. Plants; I3-J3.

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- 1) Contractor shall replace 4 plants in the middle bed between the house and the paver steps.
  - c. Plants; I3-J3.
    - 1) Contractor shall replace 8 plants in the lower bed (4 on either side of the paver steps).
    - 2) Plants include 6 irises and 2 ground cover.
  - d. Plants; J3-K3.
    - 1) Contractor shall replace 15 bulbs in the landscape bed along the west side of the upper rock wall.
  - e. Plants; J3-K3.
    - 1) Contractor shall replace 10 bulbs and 1 fuchsia in the landscape bed along the east side of the lower rock wall.
  - f. Plants; J3-K3.
    - 1) Contractor shall replace 8 plants (including 1 yucca and 1 sweet William) in the landscape bed between the upper and lower rock walls.
  - g. Surfacing material; I3-L3.
    - 1) Contractor shall restore the entire area between the two rock walls (excluding the paver steps) as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
  - h. Landscape bark border; J3-L3.
    - 1) Contractor shall restore a 12 inch border around the west, south, and east sides of the rock walls as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL**.
- H. Detail Area 7
- 1. Remain in Place
    - a. No features identified.
  - 2. Remove
    - a. No features identified.
  - 3. Remove and Reinstall
    - a. No features identified.
  - 4. Remove and Replace in Kind

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- a. Plants; Entire Detail Area.
  - 1) Contractor shall replace 10 irises and 4 other bulbs.
- b. Surfacing material; Entire Detail Area.
  - 1) Contractor shall restore a 12 inch border along the fence as a landscape bed with topsoil and landscape bark per **SECTION 31 23 23 – FILL.**

**3.03 ADDITIONAL PROPERTY-SPECIFIC SPECIFICATIONS**

- A. The Excavation Plan for this property is presented in Figure 13a of **Appendix D.**
  - 1. Reduced dig areas are presented on the Excavation Plan in the vicinity of:
    - a. Fences. Contractor shall slope excavations away from the base of all fences to Remain in Place and may need to reduce digging in the vicinity of fence posts that are in poor condition.
    - b. Houses and other permanent structures. Contractor shall slope excavations away from the base of all permanent structures.
    - c. Trees and plants to Remain in Place. Reduced dig areas shown in the Excavation Plan are not necessarily drawn to scale. Contractor is responsible for verifying the CRZ and plant protection dimensions prior to excavation.
- B. The Restoration Plan for this property is presented in Figure 13b of **Appendix D.**
- C. Contractor does not need to provide a kennel for this property.

END OF SECTION

# Appendix A

296-848 WAC: Safety Standards for Arsenic

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## Chapter 296-848 WAC Safety Standards for Arsenic (Form Number F414-130-000)

**LAST UPDATED 05/01/2014**

This book contains rules for Safety Standards for arsenic, as adopted under the Washington Industrial Safety and Health Act of 1973 (Chapter 49.17 RCW).

DATE: The new issue date of this book is May 2014. A brief promulgation history, set within brackets at the end of each section, gives statutory authority, administrative order of promulgation, and date of adoption of filing.

### **TO RECEIVE E-MAIL UPDATES:**

- Sign up for our Listserv at [www.Lni.wa.gov/main/Listservs/SafetyStandards.asp](http://www.Lni.wa.gov/main/Listservs/SafetyStandards.asp)

### **TO PRINT YOUR OWN PAPER COPY OR TO VIEW THE RULE ONLINE:**

- Go to: <http://www.lni.wa.gov/Safety/Rules/Find/>
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- E-Mail your mailing address and the book request to: [rulesrequest@lni.wa.gov](mailto:rulesrequest@lni.wa.gov)

### **DOSH CONTACT INFORMATION:**

- Physical address: 7273 Linderson Way, Tumwater, WA 98501-5414, located off I-5 Exit 101 south of Tumwater.
- Mailing address: DOSH Standards and Information, PO Box 44810, Olympia, WA 98504-4810.
- Information phone number is 1-800-4BESAFE

### **Also available on the WISHA web site:**

<ul style="list-style-type: none"><li>• WISHA Core Rules</li><li>• Other General WISHA Rules</li><li>• Industry and Task-Specific Rules</li><li>• Proposed Rules and Hearings</li><li>• Newly Adopted Rules and New Rule Information</li></ul>	<ul style="list-style-type: none"><li>• WISHA Regional Directives (WRDs)</li><li>• WISHA Interim Operations and Interpretive Memoranda (WHM)</li><li>• Memoranda of Understanding (MOU)</li></ul>
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Chapter 296-848 WAC  
ARSENIC

LAST UPDATED 05/01/2014

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**WAC 296-848-100 Scope.** This chapter applies to all occupational exposure to inorganic arsenic.

**Definitions:**

**Inorganic arsenic** means elemental arsenic (As), copper aceto-arsenite, and inorganic compounds containing arsenic (measured as “As”), except arsine. Inorganic compounds do not contain the element carbon.

**Exposure** is the contact an employee has with inorganic arsenic, whether or not protection is provided by respirators or other personal protective equipment (PPE). Exposure can occur through various routes of entry such as inhalation, ingestion, skin contact, or skin absorption.

**Helpful tool:**

**Arsenic contamination in soil; information and guidance for employers.**

Use this tool if you have employees who work with soil. It will help you find out if this rule is applicable to your employee's exposure to soil.

*Exemptions:*

- *This chapter does not apply to any of the following:*
  - *Exposures during agricultural operations.*
  - *Pesticide applications, including the treatment of wood with preservatives.*
  - *Use of wood treated with inorganic arsenic.*
  - *Arsine, a gas identified by Chemical Abstract Service (CAS) Registry No. 7784-42-1.*
  - *Laboratories subject to the requirements found in another chapter:*
    - ◆ *Go to the General occupational health standards, chapter 296-62 WAC;*
    - AND*
    - ◆ *Find the section, Hazardous chemicals in laboratories, WAC 296-62-400.*
  - *Inorganic arsenic present in a form and handled in such a way that airborne exposures could not occur. For example, inorganic arsenic present in glass is fused in the material. Due to the fused form, airborne exposure cannot occur when the glass is scored and subsequently broken.*

All requirements in this chapter will not apply to every workplace with an occupational exposure. The following steps will show you which requirements apply to your workplace.

**Step 1:** Follow requirements in the basic rules sections, WAC 296-848-20010 through 296-848-20090.

- This includes completing an exposure evaluation, as specified in Exposure evaluations, WAC 296-848-20060, to:
  - Obtain employee 8-hour exposure monitoring results of airborne inorganic arsenic;
  - AND**
  - Determine if employee exposure monitoring results are above, at, or below these values:
    - ◆ 8-hour time-weighted average (TWA<sub>8</sub>) . . . . . 10 micrograms per cubic meter (µg/m<sup>3</sup>).
    - ◆ 8-hour action level (AL) . . . . . 5 µg/m<sup>3</sup>.

**WAC 296-848-100 (Cont.)**

**Step 2:** Use employee exposure monitoring results from Step 1 and follow Table 1 to find out which additional sections of this chapter apply to your workplace.

<b>Table 1 Sections That Apply To Your Workplace</b>	
<b>If:</b>	<b>Then continue to follow the Basic Rules, and these additional requirements:</b>
<ul style="list-style-type: none"> <li>• Employee exposure monitoring results are above the TWA<sub>8</sub></li> </ul>	<ul style="list-style-type: none"> <li>• Training, exposure monitoring, and medical monitoring, WAC 296-848-30005 through 296-848-30080; <b>AND</b></li> <li>• Exposure control areas, WAC 296-848-40005 through 296-848-40045.</li> </ul>
<ul style="list-style-type: none"> <li>• Employee exposure monitoring results are:                             <ul style="list-style-type: none"> <li>– At or below the TWA<sub>8</sub></li> <li><b>AND</b></li> <li>– At or above AL</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Training, exposure monitoring, and medical monitoring, WAC 296-848-30005 through 296-848-30080.</li> </ul>
<ul style="list-style-type: none"> <li>• Employee exposure monitoring results are below the AL;</li> <li>• Eye or skin irritation from exposure to inorganic arsenic cannot occur</li> </ul>	<ul style="list-style-type: none"> <li>• No additional requirements apply if exposures remain stable.</li> </ul>
<ul style="list-style-type: none"> <li>• Employees could experience eye or skin irritation from exposure to inorganic arsenic</li> </ul>	<ul style="list-style-type: none"> <li>• Training in WAC 296-848-30005.</li> <li>• Washing, showering, and changing in WAC 296-848-40030.</li> <li>• Personal protective equipment (PPE) in WAC 296-848-40040.</li> </ul>

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-100, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-200 Basic rules.**

**Summary:**

**Your responsibility:**

To measure and minimize employee exposure to inorganic arsenic.

**Important:**

The sections listed in basic rules apply to all employers covered by the scope of this chapter, WAC 296-848-100. To find additional sections that may apply to you, go to the Scope, WAC 296-848-100, and follow Table 1.

**Contents**

Preventive practices  
WAC 296-848-20010.

Washing facilities  
WAC 296-848-20025.

Exposure evaluations  
WAC 296-848-20060.

## WAC 296-848-200 (Cont.)

### Notification

WAC 296-848-20070.

### Exposure records

WAC 296-848-20090.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-200, filed 12/21/04, effective 05/01/05.]

## WAC 296-848-20010 Preventive practices.

### You must:

- (1) Effectively communicate the hazards of inorganic arsenic by doing both of the following:
  - Keep container labels free of statements that contradict or detract from the labels' hazard warning.

*Note: You may use labels required by other laws, rules, or ordinances in addition to, or in combination with, labels required by this section.*

### You must:

- Prior to June 1, 2015, in lieu of labeling requirements in WAC 296-848-30007, employers may apply precautionary labels to all shipping and storage containers of inorganic arsenic, and to all products containing inorganic arsenic, bearing the following legend.

<p><b>DANGER</b> <b>CONTAINS INORGANIC ARSENIC</b> <b>CANCER HAZARD</b> <b>HARMFUL IF INHALED OR SWALLOWED</b> <b>USE ONLY WITH ADEQUATE VENTILATION</b> <b>OR</b> <b>RESPIRATORY PROTECTION</b></p>
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- Labels are not required when the inorganic arsenic in the product is bound in such a manner so as to make unlikely the possibility of airborne exposure to inorganic arsenic. (Possible examples of products not requiring labels are semiconductors, light emitting diodes and glass.)

### Note:

- *You should keep containers tightly covered when not in use to help prevent unnecessary exposure and accidental spills.*
- *Contaminated items should be handled and disposed of to prevent further exposure in the workplace. For example, vacuuming or wet wiping contaminated equipment helps prevent the release of dust into the air.*

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**WAC 296-848-20010 (Cont.)**

*Reference:*

- *Additional requirements are found in other chapters:*
  - *For spills, leaks, or other releases, go to Emergency response, chapter 296-824 WAC.*
  - *For labeling go to WAC 296-901-140, Hazardous communication.*

**You must:**

- (2) Establish safe and effective housekeeping and maintenance practices by doing all the following:
- Develop and keep a written housekeeping and maintenance plan that lists appropriate frequencies for:
    - Housekeeping operations;
    - **AND**
    - Cleaning and maintaining dust collection equipment.
  - Keep surfaces free of accumulations of inorganic arsenic, to the degree feasible.
  - When cleaning floors and other accessible surfaces:
    - Use vacuuming or other cleaning methods that minimize the release of inorganic arsenic into the air.
    - Do not use compressed air.
    - Select vacuums that have high efficiency particulate air (HEPA) filters.
    - Use and empty vacuums in a way that minimizes the release of inorganic arsenic back into the workplace.

*Note:*

- *Shoveling or brushing may be used only when vacuuming or other cleaning methods have not been effective.*
- *Using non-HEPA vacuums will increase inorganic arsenic contamination in air and on area surfaces.*

**You must:**

- Maintain ventilation systems, including dust collection equipment, to make sure they are effective. Do all of the following:
    - Perform periodic inspections for effectiveness.
    - Periodically clean the equipment.
    - Keep a note of the most recent inspection for effectiveness, and cleaning or maintenance.
- (3) Prevent eye or skin contact with:
- Arsenic trichloride;
  - **AND**
  - Liquid or particulate forms of inorganic arsenic when contact could cause eye or skin irritation.

*Note: Arsenic trichloride is corrosive and can be quickly absorbed through skin.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 14-07-086 (Order 13-08), § 296-848-20010, filed 03/18/14, effective 05/01/14. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-20010, filed 12/21/04, effective 05/01/05.]

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### WAC 296-848-20025 Washing facilities.

**You must:**

- Provide washing facilities for employees exposed to inorganic arsenic.

*References:* For additional washing facility requirements, go to another chapter, the Safety and health core rules, chapter 296-800 WAC, and find the section titled, *Provide convenient and clean washing facilities, WAC 296-800-23025.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-20025, filed 12/21/04, effective 05/01/05.]

### WAC 296-848-20060 Exposure evaluations.

**Important:**

- This section applies when workplace operations create potential airborne exposure to inorganic arsenic.
- When you conduct an exposure evaluation in a workplace where an employee uses a respirator, the protection provided by the respirator is not considered.
- Following this section will fulfill the requirements to identify and evaluate respiratory hazards found in another chapter, Respiratory hazards, chapter 296-841 WAC.

**You must:**

- (1) Conduct an employee exposure evaluation to accurately determine airborne concentrations of inorganic arsenic by completing Steps 1 through 5 of the Exposure Evaluation Process, each time any of the following apply:
  - No evaluation has been conducted.
  - Changes have occurred in any of the following areas that may result in new or increased exposures:
    - Production.
    - Processes.
    - Exposure controls such as ventilation systems or work practices.
    - Personnel.
  - You have any reason to suspect new or increased exposure may occur.
- (2) Provide affected employees and their designated representatives an opportunity to observe exposure monitoring during Step 4 of the Exposure Evaluation Process.
  - Make sure observers do not interfere with exposure measurements.
  - Make sure observers are entitled to:
    - An explanation of your exposure measurement and monitoring procedures;
    - Observe all tasks of exposure measurement performed at the workplace;
    - AND**
    - Receive a copy of the exposure measurement results when you obtain them; or are allowed to record the exposure measurement results, if made during observations.

### WAC 296-848-20060 (Cont.)

- Make sure observers who enter areas with inorganic arsenic exposure:
  - Are provided with and use the same protective clothing, respirators, and other personal protective equipment (PPE) that employees working in the area are required to use;  
**AND**
  - Follow safety and health requirements that apply.

### Exposure Evaluation Process

#### Important:

- Following the Exposure Evaluation Process is not necessary when you have documentation conclusively demonstrating inorganic arsenic exposures for a particular operation and material, cannot exceed the action level (AL) during any conditions reasonably anticipated. Documentation can be based on quantitative information such as soil test results or qualitative information such as observations of how inorganic arsenic-containing materials are handled.
  - Retain this documentation for as long as you rely on it.

**Step 1:** Identify all employees who have potential airborne exposure to inorganic arsenic in your workplace.

**Step 2:** Select employees from those identified in Step 1 who will have their 8-hour exposures monitored.

- Make sure the exposures of the employees selected represent 8-hour exposures for all employees identified in Step 1, including each job classification, work area, and shift.

#### Note:

- *A written description of the procedure used for obtaining representative employee exposure monitoring results needs to be kept as part of your exposure records required by this chapter in Exposure records, WAC 296-848-20090. This description can be created while completing Steps 2 through 4 of this exposure evaluation process.*

**Step 3:** Determine how you will obtain employee exposure monitoring results.

- Select and use a method that meets the following criteria for accuracy:
  - $\pm 25\%$ , with a confidence level of 95%, when concentrations are potentially at or above an 8-hour time-weighted average of 10 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ );  
**OR**
  - $\pm 35\%$ , with a confidence level of 95%, when concentrations are potentially between the 8-hour time-weighted averages of 5  $\mu\text{g}/\text{m}^3$  and 10  $\mu\text{g}/\text{m}^3$ .

#### Note:

- *Here are examples of methods that meet this accuracy requirement:*
  - *OSHA Method ID105 found by going to <http://www.osha.gov/dts/sltc/methods/toc.html>.*
  - *NIOSH method 7901 found by going to <http://www.cdc.gov/niosh/homepage.html> and linking to the NIOSH Manual of Analytical Methods.*

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**WAC 296-848-20060 (Cont.)**

**Step 4:** Obtain employee exposure monitoring results by collecting air samples representing employees identified in Step 1.

- Sample at least one shift representative of the 8-hour exposure, for each employee selected in Step 2.
- Make sure samples are collected from each selected employee's breathing zone.

*Note:*

- *You may use any sampling method that meets the accuracies specified in Step 3. Examples of these methods include:*
  - *Real-time monitors that provide immediate exposure monitoring results.*
  - *Equipment that collects samples that are sent to a laboratory for analysis.*
- *The following are examples of methods for collecting samples representative of 8-hour exposures.*
  - *Collect one or more continuous samples, for example, a single 8-hour sample or 4 2-hour samples.*
  - *Take a minimum of 4 to 7 brief samples, such as 15-minute samples, during the work shift and at times selected randomly.*
- *For work shifts longer than 8 hours, monitor the continuous 8-hour portion of the shift expected to have the highest average exposure concentration.*

**Step 5:** Have the samples you collected analyzed to obtain monitoring results representing 8-hour exposures.

- Go to the Scope of this chapter, WAC 296-848-100, and compare employee exposure monitoring results to the values found in Step 1 and follow Step 2 to determine if additional sections of this chapter apply.

*Note:*

- *You may contact your local WISHA consultant for help:*
  - *Interpreting data or other information.*
  - *Determining 8-hour employee exposure monitoring results.*
- *To contact a WISHA consultant:*
  - *Go to the Safety and health core rules, chapter 296-800 WAC;*  
**AND**
  - *Find the Resources section, and under "Other Resources," find Service Locations for Labor and Industries.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-20060, filed 12/21/04, effective 05/01/05.]

### WAC 296-848-20070 Notification.

**You must:**

- Provide written notification of exposure monitoring results, including notification about whether exposures exceed the permissible exposure limit (PEL), to employees represented by your exposure evaluation, within 5 business days after the monitoring results become known to you.
  - In addition, when employee exposure monitoring results are above the permissible exposure limit (PEL), provide written notification of all the following within 15 business days after these exposure monitoring results become known to you.
    - ◆ Corrective actions being taken and a schedule for completion;  
**AND**
    - ◆ Any reason why exposures cannot be lowered to below the PEL.

*Note:*

- *You can notify affected employees either individually or post the notifications in areas readily accessible to affected employees.*
- *When notifying employees about corrective actions, your notification may refer them to a separate document that is available and provides the required information.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-20070, filed 12/21/04, effective 05/01/05.]

### WAC 296-848-20090 Exposure records.

**You must:**

- Establish and keep complete and accurate records for all exposure monitoring conducted under this chapter. Make sure the record includes, at least:
  - The name, Social Security number or other unique identifier, and job classification of the employee sampled and all other employees represented by the sampled employee.
  - A description of the methods used to obtain exposure monitoring results and evidence of the method's accuracy.
  - A description of the procedure used to obtain representative employee exposure monitoring results.
  - The date, number, duration, location, and the result of each sample taken.
  - Any environmental conditions that could affect exposure concentration measurements.

*Note: It is useful to record any personal protective equipment worn by the employee in addition to the type of respirator worn.*

**You must:**

- Keep exposure monitoring records for at least 30 years.

*Reference:*

- *To see additional requirements for employee exposure records including access and transfer requirements, go to another chapter, Employee medical and exposure records, chapter 296-802 WAC.*
- *Exposure monitoring records need to be kept longer than 30 years for employees participating in medical monitoring. Go to Medical records, WAC 296-848-30080, found within this chapter.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-20090, filed 12/21/04, effective 05/01/05.]

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## WAC 296- 848-300 Training, exposure monitoring, and medical monitoring.

### Summary:

### Your responsibility:

To detect any significant changes in employee health and exposure monitoring results.

### Important:

- These sections apply when skin or eye irritation could occur or when employee exposure monitoring results are either:
  - At or above the action level (AL) of 5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for inorganic arsenic;
  - OR**
  - Above the permissible exposure limit (PEL) of 10  $\mu\text{g}/\text{m}^3$  for inorganic arsenic.

### Contents

#### Training

WAC 296-848-30005.

#### Communication of hazards

WAC 296-848-30007.

#### Periodic exposure evaluations

WAC 296-848-30010.

#### Medical evaluations

WAC 296-848-30030.

#### Medical records

WAC 296-848-30080.

[Statutory Authority: Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-300, filed 12/21/04, effective 05/01/05.]

## WAC 296-848-30005 Training.

### You must:

- Train employees:
  - Who are exposed above the action level (AL) of 5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) of air;
  - OR**
  - Who could experience eye or skin irritation from exposure.
- Provide training:
  - At the time of initial assignment;
  - AND**
  - At least every 12 months after initial training.

### WAC 296-848-30005 (Cont.)

- Make sure training and information includes all of the following:
  - A review of WAC 296-848-100 through 296-848-40045, and 296-848-500.
  - The following health information about inorganic arsenic:
    - ◆ Inorganic arsenic is a poison and can affect your body if it is swallowed or inhaled.
    - ◆ Exposure to airborne concentrations of inorganic arsenic may cause lung cancer and can be a skin irritant.
    - ◆ Arsenic trichloride can be absorbed readily through your skin and is especially dangerous.
    - ◆ Wash hands thoroughly before eating or smoking to minimize your risk for swallowing inorganic arsenic.
  - The purpose for medical evaluations and a description of how you are fulfilling the medical evaluation requirements of this chapter found in Medical evaluations, WAC 296-848-30030.
- Make a copy of each of the following readily available to all employees required to be trained under this section:

#### *Reference:*

- *To see additional training and information requirements in other chapters, go to the:*
  - *Respirators rule, chapter 296-842 WAC.*
  - *WAC 296-901-140, Hazard communication.*
- *When following these requirements, include specific information about potential exposures to inorganic arsenic, such as the types of operations, locations, quantities, exposure sources, exposure controls, inorganic arsenic use, and storage.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 14-07-086 (Order 13-08), § 296-848-30005, filed 03/18/14, effective 05/01/14. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-30005, filed 12/21/04, effective 05/01/05.]

### WAC 296-848-30007 Communication of hazards.

#### **You must:**

##### Hazard communication – General.

- Chemical manufacturers, importers, distributors and employers shall comply with all requirements of the Hazard Communication Standard (HCS), WAC 296-901-140 for inorganic arsenic.
- In classifying the hazards of inorganic arsenic at least the following hazards are to be addressed: Cancer; liver effects; skin effects; respiratory irritation; nervous system effects; and acute toxicity effects.

**WAC 296-848-30007 (Cont.)**

- Employers shall include inorganic arsenic in the hazard communication program established to comply with the HCS, WAC 296-901-140. Employers shall ensure that each employee has access to labels on containers of inorganic arsenic and to safety data sheets, and is trained in accordance with the requirements of HCS and WAC 296-848-30005.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 14-07-086 (Order 13-08), § 296-848-30007, filed 03/18/14, effective 05/01/14.]

**WAC 296-848-30010 Periodic exposure evaluations.**

*Exemption:*

- Periodic exposure evaluations are not required if exposure monitoring results conducted to fulfill requirements in Exposure evaluation, WAC 296-848-20060, are below the action level (AL).*

**You must:**

- Obtain employee exposure monitoring results as specified in Table 2 by repeating Steps 2, 4, and 5 of the Exposure Evaluation Process found within this chapter, in Exposure evaluations, WAC 296-848-20060.

*Note: If you document that one work shift consistently has higher exposure monitoring results than another for a particular operation, then you limit sample collection to the work shift with higher exposures and can use results to represent all employees performing the operation on other shifts.*

<b>Table 2 Periodic Exposure Evaluation Frequencies</b>	
<b>If 8-hour employee exposure monitoring results:</b>	<b>Then:</b>
Are between the: – Action level (AL) of 5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ); <b>AND</b> – Permissible exposure limit (PEL) of $10 \mu\text{g}/\text{m}^3$	Conduct additional exposure evaluations at least every 6 months for the employees represented by the monitoring results.
Are above the PEL	Conduct additional exposure evaluations at least every 3 months for the employees represented by the monitoring results.
For employees previously above the PEL, have decreased: – To a concentration between the PEL and AL; <b>AND</b> – The decrease is demonstrated by 2 consecutive exposure evaluations made at least 7 days apart	You may decrease your evaluation frequency to every 6 months for the employees represented by the monitoring results.
Have decreased to below the AL; <b>AND</b> The decrease is demonstrated by 2 consecutive exposure evaluations made at least 7 days apart	You may stop periodic employee exposure evaluations for employees represented by the monitoring results.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-30010, filed 12/21/04, effective 05/01/05.]

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## WAC 296-848-30030 Medical evaluations.

### Important:

- Medical evaluations conducted under this section will satisfy the medical evaluation requirement found in another chapter, Respirators, chapter 296-842 WAC.

### You must:

- Make medical evaluations available to current employees who have been, are, or will be exposed to inorganic arsenic concentrations above the AL:
  - At least 30 days in any 12-month period;

**OR**

  - A total of 10 years or more of combined employment with you or previous employers with at least 30 days of exposure per year.
- Make medical evaluations available at no cost to employees.
  - Pay all costs, including travel costs and wages associated with any time spent outside of the employee's normal work hours.
- Make medical evaluations available at reasonable times and places.
- Make medical evaluations available by completing Steps 1 through 6 of the Medical Evaluation Process for each employee covered.

### Note:

- *Employees who wear respirators need to be medically evaluated to make sure the respirator will not harm them, before they are assigned work in areas requiring respirators. Employees who decline to receive medical examination and testing to monitor for health effects caused by inorganic arsenic are not excluded from receiving a separate medical evaluation for a respirator use.*
- *If employers discourage participation in medical monitoring for health effects caused by inorganic arsenic, or in any way interfere with an employee's decision to continue with this program, this interference may represent unlawful discrimination under RCW 49.17.160, Discrimination against employee filing, instituting proceeding, or testifying prohibited-Procedure-Remedy.*

### Helpful tool:

#### Declination form for nonemergency related medical evaluations.

You may use this optional form to document employee decisions to decline participation in the medical evaluation process for exposure to inorganic arsenic. To see this form, go to the Resources section within this chapter.

### Medical Evaluation Process

**Step 1:** Identify employees who qualify, as stated above, for medical evaluations.

**WAC 296-848-30030 (Cont.)**

**Step 2a:** Make medical evaluations available for employees identified in Step 1 at the following times:

- Initially, when employees are assigned to work in an area where exposure monitoring results are, or will likely be, above the action level for at least 30 days in a 12-month period.
- Periodically as specified in Table 3.
- When employment with exposure ends, if the employee has not had an evaluation within the 6-month period before exposure ends. Include in these evaluations the same content as specified in Table 4 for initial evaluations, excluding a chest X ray.

<b>Table 3 Frequencies for Periodic Medical Evaluations</b>	
<b>For:</b>	<b>Provide periodic medical evaluations every:</b>
Employees less than 45 years old with less than 10 years of exposure above the AL	12 months
Employees 45 or older; <b>AND</b> Employees with more than 10 years of exposure above the AL	6 months; <b>AND</b> 12 months to obtain a 14 by 17-inch posterior-anterior chest X ray for monitoring purposes, unless the LHCP has determined a different frequency for periodic X rays.

**Step 2b:** Provide appropriate medical examination and emergency treatment when an employee identified in Step 1 develops signs or symptoms commonly associated with inorganic arsenic exposure.

**Step 3:** Select a licensed healthcare professional (LHCP) who will conduct or supervise examinations and procedures.

**Step 4:** Make sure the LHCP receives all of the following before the medical evaluation is performed:

- A copy of:
  - This chapter;
  - **AND**
  - The following information found in the General occupational health standards, chapter 296-62 WAC:
    - ♦ Appendix A-Inorganic Arsenic Substance Information Sheet, WAC 296-62-07354(1).
    - ♦ Appendix B-Substance Technical Guidelines, WAC 296-62-07354(2).
    - ♦ Appendix C-Medical Surveillance Guidelines, WAC 296-62-07354(3).
- A description of the duties of the employee being evaluated and how these duties relate to inorganic arsenic exposure.
- The anticipated or representative exposure monitoring results for the employee being evaluated.
- A description of the personal protective equipment (PPE) each employee being evaluated uses or will use.
- Information from previous employment-related examinations when this information is not available to the examining LHCP.

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**WAC 296-848-30030 (Cont.)**

- Instructions that the written opinions the LHCP provides you be limited to the following information:
  - Results from examinations and tests.
  - The LHCP's opinion about whether or not medical conditions were found that would increase the employee's risk for impairment from exposure to inorganic arsenic.
  - Any recommended limitations for:
    - ◆ Inorganic arsenic exposure;  
**AND**
    - ◆ Use of respirators or other PPE.
  - A statement that the employee has been informed of medical results and medical conditions caused by inorganic arsenic exposure requiring further examination or treatment.

**Step 5:** Make the medical evaluation available to the employee. Make sure it includes the content listed in Table 4, Content of Medical Evaluations.

**Step 6:** Obtain the LHCP's written opinion for the employee's medical evaluation and give a copy to the employee.

- Make sure the written opinion is limited to the information specified for written opinions in Step 4.

*Note: If the written opinion contains specific findings or diagnoses unrelated to occupational exposure, send it back and obtain a revised version without the additional information.*

WAC 296-848-30030 (Cont.)

<b>Table 4 Content of Medical Evaluations</b>	
<b>When conducting:</b>	<b>Include:</b>
An initial evaluation	<ul style="list-style-type: none"> <li>• A work history and medical history including:                             <ul style="list-style-type: none"> <li>– Smoking history.</li> <li>– The presence and degree of respiratory symptoms such as breathlessness, cough, sputum production, and wheezing.</li> </ul> </li> <li>• A physical examination that includes:                             <ul style="list-style-type: none"> <li>– A 14 by 17-inch posterior-anterior chest X ray and the International Labor Office UICC/Cincinnati (ILO U/C) rating.</li> <li>– A nasal and skin examination.</li> </ul> </li> <li>• Additional examinations the licensed healthcare professional (LHCP) believes appropriate based on the employee's exposure to inorganic arsenic or respirator use.</li> </ul>
Periodic evaluations for employees less than 45 years old with less than 10 years of exposure above the action level (AL)	<ul style="list-style-type: none"> <li>• The same content as specified for initial evaluations repeated every 12 months.</li> </ul>
Periodic evaluations for employees: <ul style="list-style-type: none"> <li>• 45 or older;</li> <li><b>OR</b></li> <li>• With more than 10 years of exposure above the AL</li> </ul>	<ul style="list-style-type: none"> <li>• The following content repeated every 6 months:                             <ul style="list-style-type: none"> <li>– A work history and medical history including:                                     <ul style="list-style-type: none"> <li>❖ Smoking history.</li> <li>❖ The presence and degree of respiratory symptoms such as breathlessness, cough, sputum production, and wheezing.</li> </ul> </li> <li>– A physical examination that includes a nasal and skin examination.</li> <li>– Additional examinations the LHCP believes appropriate based on the employee's exposure to inorganic arsenic or respirator use.</li> </ul> </li> <li>• A physical examination, repeated every 12 months that obtains a 14 by 17-inch posterior-anterior chest X-ray and the International Labor Office UICC/Cincinnati (ILO U/C) rating</li> </ul>

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-30030, filed 12/21/04, effective 05/01/05.]

## WAC 296-848-30080 Medical records.

### Important:

- This section applies when a medical evaluation is performed, or any time a medical record is created for an employee exposed to inorganic arsenic.

### You must:

- Establish and maintain complete and accurate medical records for each employee receiving a medical evaluation and make sure the records include all the following:
  - The employee's name and Social Security number, or other unique identifier.
  - A description of the employee's duties.
  - A copy of the licensed healthcare professional's (LHCP's) written opinions.
  - The anticipated or representative employee exposure monitoring results provided to the LHCP for the employee.
- Maintain medical evaluation records for the duration of employment plus 30 years.

### Note:

- *Your medical provider may keep these records for you. Other medical records, such as the employee's medical history or X ray, need to be kept as a confidential record by the medical provider and accessed only with the employee's consent.*

### Reference:

- *To see additional requirements for employee medical record, including access and transfer requirements, go to Employee medical and exposure records, chapter 296-802 WAC.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-30080, filed 12/21/04, effective 05/01/05.]

## WAC 296-848-400 Exposure control areas.

### Summary:

### Your responsibility:

To protect employees from exposure to inorganic arsenic by using feasible exposure controls and appropriate respirators.

### Important:

These sections apply when employee exposure monitoring results are above the permissible exposure limit (PEL) of 10 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) of air.

### Contents

Exposure control plan  
WAC 296-848-40005.

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**WAC 296-848-400 (Cont.)**

Exposure controls  
*WAC 296-848-40020.*

Exposure control areas  
*WAC 296-848-40025.*

Clean-up facilities and lunchrooms  
*WAC 296-848-40030.*

Personal protective equipment  
*WAC 296-848-40040.*

Respirators  
*WAC 296-848-40045.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-400, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-40005 Exposure control plan.**

**Important:**

Use of employee rotation to control exposures is not advisable since inorganic arsenic is a known carcinogen.

**You must:**

- Establish and implement a complete written exposure control plan that includes at least the following, for exposure control areas:
  - A description of each operation releasing inorganic arsenic, for example:
    - ◆ Crew size.
    - ◆ Current exposure controls.
    - ◆ Materials processed.
    - ◆ Machinery used.
    - ◆ Operating procedures.
    - ◆ Maintenance practices.
  - Exposure evaluation data.
  - A report of the technology considered for exposure controls.
  - Engineering plans and studies used as a basis for selecting exposure controls.
  - A detailed schedule for implementing:
    - ◆ Feasible exposure controls, if immediate implementation is not possible.
    - ◆ Changes to enhance current exposure controls, when necessary.
  - An analysis of the effectiveness of the exposure controls considered, when controls will not reduce exposures to or below the permissible exposure limit (PEL).
  - Other relevant information.

**WAC 296-848-40005 (Cont.)**

- Review and update your exposure control plan at least every 6 months to keep it current.
- Implement exposure controls on the quickest schedule feasible if controls will not reduce exposure to or below the PEL.
- Provide a copy of your exposure control plan to affected employees and their designated representatives, when they ask to review or copy it.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-40005, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-40020 Exposure controls.**

**Important:**

- Use of employee rotation to control exposures is not advisable since inorganic arsenic is a known carcinogen.
- Respirators and other personal protective equipment (PPE) do not substitute for feasible exposure controls.

**You must:**

- Use feasible exposure controls to reduce exposures to or below the permissible exposure limit (PEL), or as low as achievable.

*Reference:* To see examples of exposure controls go to *Respiratory hazards, chapter 296-841 WAC, and find Table 1 in the section, Control employee exposure, WAC 296-848-20010.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-40020, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-40025 Exposure control areas.**

**You must:**

- Establish temporary or permanent exposure control areas where airborne concentrations of inorganic arsenic are above the permissible exposure limit (PEL) by doing all the following:
  - Distinguish the boundaries of exposure control areas from the rest of the workplace in any way that minimizes employee access.
  - Allow only authorized personnel to enter exposure control areas.
  - Post signs at access points to exposure control areas that include this warning:

<p style="text-align: center;"><b>DANGER</b> <b>INORGANIC ARSENIC</b> <b>MAY CAUSE CANCER</b> <b>DO NOT EAT, DRINK OR SMOKE</b> <b>WEAR RESPIRATORY PROTECTION IN THIS AREA</b> <b>AUTHORIZED PERSONNEL ONLY</b></p>
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- Prior to June 1, 2016, employers may use the following legend in lieu of that specified above in this section:

**WAC 296-848-40025 (Cont.)**

**DANGER  
INORGANIC ARSENIC  
CANCER HAZARD  
AUTHORIZED PERSONNEL ONLY  
NO SMOKING OR EATING  
RESPIRATOR REQUIRED**

- Make sure signs are kept clean and well lit so they are easy to read.
- Keep signs and areas near them free of statements that contradict or detract from their message.

*Note:* This requirement does not prevent you from posting signs required by other laws, rules, or ordinances.

**You must:**

- Make sure employees entering exposure control areas have an appropriate respirator.
- Prevent all of the following activities from occurring in exposure control areas unless they are conducted in required lunchrooms, change rooms, or showers:
  - ◆ Eating food or drinking beverages.
  - ◆ Smoking.
  - ◆ Chewing tobacco or gum.
  - ◆ Applying cosmetics.

*Note:*

- You may use permanent or temporary enclosures, caution tape, ropes, painted lines on surfaces, or other materials to visibly distinguish exposure control areas or separate them from the rest of the workplace.
- When distinguishing exposure control areas, you should consider factors such as:
  - The level and duration of airborne exposure.
  - Whether the area is permanent or temporary.
  - The number of employees in adjacent areas.

*Reference:* To see other requirements for respirators within this chapter, go to *Respirators*, WAC 296-848-40045.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 14-07-086 (Order 13-08), § 296-848-40025, filed 03/18/14, effective 05/01/14. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-40025, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-40030 Clean-up facilities and lunchrooms.**

**You must:**

- Provide the following facilities for employees who could experience eye or skin irritation from exposure to inorganic arsenic or who work in exposure control areas:
  - Clean change rooms with separate storage for street clothes and personal protective equipment (PPE).
  - Shower facilities.

### WAC 296-848-40030 (Cont.)

- Make sure employees who could experience eye or skin irritation from exposure to inorganic arsenic or who work in exposure control areas:
  - Shower at the end of the work shift;

**AND**

  - Wash their hands and face before eating.
  
- Provide lunchrooms for employees working in exposure control areas that are:
  - Located so they are readily accessible to the employees.
  - Temperature controlled.
  - Under positive pressure compared to surrounding areas.
  - Provided with a filtered air supply.

*Note: Lunchrooms may be located within exposure control areas, but are considered separate from the exposure control area.*

- Do the following when exposures in exposure control areas exceed an 8-hour time-weighted average of 100 micrograms of arsenic per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ):
  - Provide facilities for employees working in exposure control areas where they can remove excess contamination from protective clothing and shoes.
  - Make sure employees vacuum protective clothing and clean or change shoes before entering showers, change rooms, or lunchrooms.

*Reference: To see additional requirements for hygiene facilities:*

- *Go to the Safety and health core rules, chapter 296-800 WAC.*
- *Find Drinking water, bathrooms, washing facilities, and waste disposal, WAC 296-800-230.*

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-40030, filed 12/21/04, effective 05/01/05.]

### WAC 296-848-40040 Personal protective equipment (PPE).

#### **You must:**

- Provide at no cost to employees, make sure employees use, and maintain PPE as follows:
  - Provide clean and dry protective clothing to employees who could experience eye or skin irritation from exposure to inorganic arsenic or who work in exposure control areas.
  - Provide impervious protective clothing to employees exposed to arsenic trichloride.

*Note:*

- *Arsenic trichloride is corrosive and can be rapidly absorbed through skin.*
- *Examples of protective clothing appropriate for inorganic arsenic exposures include:*
  - *Coveralls or similar full-body work clothing.*
  - *Gloves, and shoes or coverlets.*
  - *Face shields or vented goggles when necessary to prevent eye irritation.*

**WAC 296-848-40040 (Cont.)**

**You must:**

- Make sure employees do not remove inorganic arsenic from PPE by blowing or shaking.
- Make sure protective clothing is removed:
  - ◆ In change rooms;
  - AND**
  - ◆ At the end of the work shift.
- Make sure contaminated protective clothing that will be cleaned, laundered, or disposed of, is placed in a closed container located in the change room.
  - ◆ Make sure the container prevents the release of inorganic arsenic.
- Launder protective clothing:
  - ◆ At least weekly if employees work in areas where exposure monitoring results of inorganic arsenic are below an 8-hour time-weighted average concentration of 100 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ );
  - OR**
  - ◆ Daily if employees work in areas where either exposure monitoring results of inorganic arsenic are above an 8-hour time-weighted average concentration of 100  $\mu\text{g}/\text{m}^3$  or when more frequent washing is needed to prevent skin irritation.
- Maintain the effectiveness of PPE by repairing or replacing it, as needed:
  - ◆ Dispose of protective clothing if it will not be repaired.
- Inform individuals who clean or launder protective clothing about the possible health effects associated with inorganic arsenic, including carcinogenic effects, by doing the following:
  - Provide the information in writing;
  - AND**
  - Label containers of contaminated PPE with the following warning:

<b>DANGER:</b>	
<b>CONTAMINATED WITH INORGANIC ARSENIC MAY CAUSE CANCER DO NOT REMOVE DUST BY BLOWING OR SHAKING DISPOSE OF INORGANIC ARSENIC CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS</b>	

- Prior to June 1, 2015, employers may include the following information on containers of protective clothing and equipment in lieu of the labeling requirements listed above in this section:

**WAC 296-848-40040 (Cont.)**

<b>CAUTION:</b>	
	<b>CLOTHING CONTAMINATED WITH INORGANIC ARSENIC</b>
	<b>DO NOT REMOVE DUST BY BLOWING OR SHAKING</b>
	<b>DISPOSE OF INORGANIC ARSENIC CONTAMINATED WASH WATER AS APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS REQUIRE</b>

*Reference:* To see additional Personal protective equipment requirements go to the Safety and health core rules, chapter 296-800 WAC, and find the section titled, PPE, WAC 296-800-160.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 14-07-086 (Order 13-08), § 296-848-40040, filed 03/18/14, effective 05/01/14. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 09-05-071 (Order 08-36), § 296-848-40040, filed 02/17/09, effective 04/01/09. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-40040, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-40045 Respirators.**

**Important:**

- The requirements in this section are in addition to the requirements found in other chapters:
  - Respiratory hazards, chapter 296-841 WAC.
  - Respirators, chapter 296-842 WAC.

**You must:**

- Provide each employee with an appropriate respirator that complies with the requirements of this section, and require that employees use them in circumstances where exposure is above the permissible exposure limit (PEL), including any of the following circumstances:

Employees are in an exposure control area.  
Feasible exposure controls are being put in place.  
Where you determine that exposure controls are not feasible.  
Feasible exposure controls do not reduce exposures to, or below, the PEL.  
Emergencies.

- Make sure air-purifying respirators selected have high-efficiency particulate air (HEPA) filters or N-, R-, or P-100 filters.
- Provide an employee a powered air-purifying respirator (PAPR) when this type of respirator will provide proper protection and:

A licensed healthcare professional (LHCP) allows this type of respirator in their written opinion.

**OR**

The employee chooses to use this type of respirator.

- Prohibit the use of half-facepiece respirators for protection against arsenic trichloride.

*Note:* Arsenic trichloride is corrosive and can be rapidly absorbed through skin.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 09-156-145 (Order 09-04), § 296-848-40045, filed 07/21/09, effective 09/01/09. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-40045, filed 12/21/04, effective 05/01/05.]

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## WAC 296-848-500 Definitions.

### Action level

An airborne concentration of inorganic arsenic of 5 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) of air calculated as an 8-hour time-weighted average.

### Authorized personnel

Individuals specifically permitted by the employer to enter the exposure control area to perform duties, or to observe employee exposure evaluations as a designated representative.

### Breathing zone

The space around and in front of an employee's nose and mouth, forming a hemisphere with a 6- to 9-inch radius.

### CAS (Chemical Abstract Service) number

CAS numbers are internationally recognized and used on safety data sheets (SDSs) and other documents to identify substances. For more information see <http://www.cas.org/about>.

### Day

Any part of a calendar day.

### Designated representative

Any one of the following:

- Any individual or organization to which an employee gives written authorization.
- A recognized or certified collective bargaining agent without regard to written employee authorization.
- The legal representative of a deceased or legally incapacitated employee.

### Emergency

Any event that could or does result in the unexpected significant release of inorganic arsenic. Examples of emergencies include equipment failure, container rupture, or control equipment failure.

### Exposure

The contact an employee has with inorganic arsenic, whether or not protection is provided by respirators or other personal protective equipment (PPE). Exposure can occur through various routes of entry such as inhalation, ingestion, skin contact, or skin absorption.

### Inorganic arsenic

Elemental arsenic (As), copper aceto-arsenite, and inorganic compounds containing arsenic (measured as As), except arsine. Inorganic compounds do not contain the element carbon.

### Licensed healthcare professional (LHCP)

An individual whose legally permitted scope of practice allows him or her to provide some or all of the healthcare services required for medical evaluations.

### Permissible exposure limits (PELs)

PELs are employee exposures to toxic substances or harmful physical agents that must not be exceeded. PELs are also specified in WISHA rules found in other chapters. The PEL for inorganic arsenic is an 8-hour time-weighted average ( $\text{TWA}_8$ ) of 10 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

### Time-weighted average ( $\text{TWA}_8$ )

An exposure limit averaged over an 8-hour period that must not be exceeded during an employee's workday. [Statutory Authority: RCW 49.17.010, .040, .050, and .060. 14-07-086 (Order 13-08), § 296-848-500, filed 03/18/14, effective 05/01/14. Statutory Authority: Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-01-073 (Order 04-11), § 296-848-500, filed 12/21/04, effective 05/01/05.]

**WAC 296-848-60010 Health information about inorganic arsenic.**

- Make this section readily available to employees as required in Training, WAC 296-848-30005.,
- Provide this section to the licensed health care professional (LHCP) as required in Step 4 of the medical evaluation process found in Medical evaluations, WAC 296-848-30030.

<b>Table 5 General Health Information About Inorganic Arsenic</b>
<p><b>What is inorganic arsenic?</b></p> <p>In this chapter, “inorganic arsenic” means:</p> <ul style="list-style-type: none"> <li>– The element arsenic;</li> <li>– Arsenic-containing compounds that do not contain the element carbon;</li> <li>– Cooper aceto-arsenite.</li> </ul> <p>Arsine is a gaseous inorganic arsenic compound not addressed by requirements in this chapter. It is addressed in a separate chapter, Respiratory hazards, chapter 296-841 WAC.</p>
<p><b>How does inorganic arsenic get into my body?</b></p> <p>Inorganic arsenic enters your body when you:</p> <ul style="list-style-type: none"> <li>– Breathe in (<b>inhale</b>) airborne particles such as dusts, fume, sprays, or other aerosols that contain inorganic arsenic. You will also inhale inorganic arsenic particles when you smoke tobacco products that have become contaminated from contact with inorganic arsenic at work. Some compounds, including arsenic trichloride, can be inhaled as a vapor;</li> <li>– Swallow (<b>ingest</b>) food, drink, cosmetics such as lip balm, sweat and other substances that become contaminated from contact with inorganic arsenic at work.</li> </ul> <p>Inorganic arsenic particles brought home on your clothes, shoes, or body can be inhaled or ingested by household members.</p> <p>Some inorganic arsenic compounds enter your body when <b>eye or skin contact</b> occurs. Arsenic trichloride is one example of a compound that is readily <b>absorbed</b> through the eyes and skin.</p>
<p><b>What happens after inorganic arsenic enters my body?</b></p> <p>Once inorganic arsenic enters your body, some of it is changed into a less harmful organic form by the liver. Both the organic and inorganic forms leave your body in urine.</p> <p>Most of the arsenic will be gone within several days, although some will remain in your body for several months and even longer.</p>
<p><b>Why is medical monitoring necessary?</b></p> <p>Although exposure to inorganic arsenic is associated with various health effects, the most serious health effects are <b>lung and skin cancer</b>. The medical monitoring requirements in this chapter are established to minimize your risk for these diseases.</p> <p>To learn more about the medical monitoring process, see Medical evaluation, WAC 296-848-30030.</p>
<p><b>What health effects and symptoms are linked with exposure to inorganic arsenic?</b></p> <p>Exposure to inorganic arsenic is associated with various health effects ranging from <b>temporary local</b> effects such as skin irritation to <b>lasting systematic</b> effects due to gradual (chronic) or sudden (acute) poisoning. Such effects should not occur if the requirements in this chapter are followed.</p> <p><b><u>Skin Health Effects</u></b></p> <p>Arsenic trioxide, arsenic trichloride, and other trivalent compounds can cause <b>skin irritation</b> from direct contact.</p>

WAC 296-848-60010 (Cont.)

**Table 5 General Health Information About Inorganic Arsenic (Continued)**

- The following moist mucous membranes are most sensitive to irritation:
  - Eye and inner eyelid (conjunctiva);
  - Linings inside the nose, mouth, and respiratory system.
- Other sites most vulnerable irritation include:
  - Eyelids;
  - Angles (the space between 2 planes) of the ears, nose, and mouth;
  - Moist and macerated (softened by moisture) areas of skin;
  - Wrists;
  - Genitalia, if personal hygiene is poor.

Inorganic arsenic is also capable of causing keratosis (**small corns or warts**), especially on palms and soles.

Trivalent arsenic compounds are **corrosive** to skin:

- Brief contact will not cause irritation, but prolonged contact causes localized engorgement (hyperemia) which later forms vesicular (blister-like) or pustular (pimple-like) eruptions.
- Exposure can create perforations (holes) in the nasal septum (the tissue dividing the nasal cavity in half).

Arsenic trioxide and arsenic pentoxide exposure have been linked to **skin sensitization** (acquired sensitivity or allergy) **and contact dermatitis** (inflammation due to allergic or irritant reaction).

**Acute Poisoning Effects:**

Acute poisoning is usually linked to ingestion, not inhalation, of inorganic arsenic. Cases of acute poisoning **rarely** occur in occupational settings and inhalation-related cases are exceedingly rare.

When acute poisoning is due to **ingestion**, the following gastrointestinal symptoms develop within 1/2 to 4 hours:

- Tightening (constriction) of the throat followed by difficulty or inability to swallow (dysphagia), pain in the region above the belly button (epigastric pain), vomiting, and watery diarrhea. Blood may appear in vomit and stools;
- Shock may develop due to severe fluid loss when the amount of inorganic arsenic swallowed is sufficiently high. Death can occur in 24 hours.

When acute poisoning is due to inhalation:

- The following symptoms develop first:
  - Cough;
  - Chest pain;
  - Shortness of breath (dyspnea);
  - Headache;
  - Extreme general weakness;
- Gastrointestinal symptoms will follow.

WAC 296-848-60010 (Cont.)

**Table 5 General Health Information About Inorganic Arsenic (Continued)**

**Chronic Poisoning Effects:**

Cases of chronic poisoning caused by **ingestion** are also rare. Symptoms are:

- Weight loss;
- Nausea and diarrhea alternating with constipation;
- Skin pigmentation and eruptions;
- Hair loss;
- Numbness in hands and feet, “pins and needles” sensation, muscle weakness, and other symptoms resulting from peripheral neuritis;
- Horizontal white lines (striations) on fingernails and toenails.

**Inhalation** of inorganic arsenic is the most common cause of chronic poisoning in occupational settings. Symptoms associated with this condition are divided into 3 phases.

- 1<sup>st</sup> phase, earliest symptoms:
    - Weakness;
    - Loss of appetite;
    - Some nausea;
    - Occasional vomiting;
    - Sense of heaviness in the stomach;
    - Some diarrhea.
  - 2<sup>nd</sup> phase symptoms:
    - Inflammation of the eyes and inner eyelid (conjunctivitis);
    - Inflammation, accompanied by an abundant discharge from mucous membranes (a catarrhal state) of the nose, larynx, and respiratory passage;
    - Symptoms associated with the common cold (Coryza), hoarseness, and mild tracheobronchitis may occur;
    - Skin lesions are common (eczematoid and allergic in type). Perforations (holes) in the nasal septum (the tissue dividing the nasal cavity in half) are the most typical lesions of the upper respiratory tract.
  - 3<sup>rd</sup> phase symptoms (related to neuritis):
    - Numbness in hands and feet, “pins and needles” sensation, muscle weakness.
    - In severe cases, motor paralyzes occur. Initially affecting the toe extensors and the peronei (outer portion of the lower leg).
    - “Wrist drop” or “foot drop” (resulting from paralysis of flexor muscles of feet or hands)
- only occur in the most severe cases.**

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 07-03-153, § 296-848-60010, filed 1/23/07, effective 6/1/07.]

**WAC 296-848-60020 Medical guidelines.**

- Make this section readily available to employees as required in Training, WAC 296-848-30005.
- Provide this section to the licensed health care professional (LHCP) as required in Step 4 of the medical evaluation process found in Medical evaluations, WAC 296-848-30030.

**Table 6 Medical Guidelines For Evaluating Employees With Exposure**

**Part 1: DOSH's Requirements**

In addition to requiring employers to train employees and protect them from inorganic arsenic exposure, this chapter (the Arsenic rule) requires employers to monitor their employees' health with assistance from licensed health care professionals (LHCPs).

- For employees who will use respirators, the LHCP will also need to provide the employer with a written medical opinion clearing the employee for workplace respirator use.

These guidelines were designed to support an informed partnership between the LHCP and the employer when monitoring the health of employees exposed to inorganic arsenic.

The employer initiates this partnership by providing the LHCP with a copy of the chapter and other supporting information about the employee and job conditions. The LHCP can then become familiar with the medical monitoring requirements found in WAC [296-848-30030](#) and [296-848-30080](#), which address:

- Frequency and content for routine (initial and periodic) medical examinations and consultations;
- Emergency and other unplanned medical follow-up;
- Medical opinions;
- Medical record retention and content.

**Part 2: Inorganic Arsenic Toxicology**

**Health information about inorganic arsenic, WAC [296-848-50020](#) provides basic information** about the health effects and symptoms associated with inorganic arsenic exposure.

In addition, consider the following information:

**Acute Poisoning**

Exfoliative dermatitis and peripheral neuritis may develop in patients who survive health effects due to acute poisoning (by ingestion).

Acute toxic symptoms of trivalent arsenical poisoning are caused by severe inflammation of the mucous membranes and greatly increased permeability of the blood capillaries.

**Acute and Chronic Poisoning**

In cases of acute and chronic poisoning, toxic effects to the myocardium (the middle layer of the heart) reported on EKG changes are now largely discounted and are attributed to electrolyte disturbances concomitant with arsenicalism.

Arsenic has a depressant effect upon bone marrow, with disturbances of both red blood cell production (erythropoiesis) and myelopoiesis.

**Chronic Poisoning**

Cases of chronic poisoning caused by ingestion are generally linked to patients taking prescribed medications. However, sputum from inhaled inorganic arsenic can be swallowed in addition to other ingested inorganic arsenic due to hand-to-mouth transfer.

**WAC 296-848-60020 (Cont.)**

**Table 6 Medical Guidelines For Evaluating Employees With Exposure (Continued)**

Skin lesions are usually melanotic and keratotic and may occasionally take the form of an intradermal cancer of the squamous cell type, but without infiltrative properties.

Chronic hepatitis and cirrhosis have been described. Liver damage is still debated and as yet the question is unanswered.

Polyneuritis may be the prominent feature, but more frequently there are numbness and parasthenias of "glove and stocking" distribution. Horizontal white lines (striations) on the fingernails and toenails are commonly seen and are considered a diagnostic accompaniment of arsenical polyneuritis.

**References:**

- Other sources for toxicology information include:
  - ToxFAQs™ and the Toxicological Profile for Arsenic. Both of these free documents are available from the Agency for Toxic Substances and Disease Registry (ATSDR) and can be obtained by:
    - Visiting <http://www.atsdr.cdc.gov/toxprofiles>
    - OR
    - Calling [1-888-422-8737](tel:1-888-422-8737).
  - A variety of technical resources on arsenic, available from the National Institutes for Occupational Safety and Health (NIOSH) by visiting <http://www.cdc.niosh/topics/chemicals.html>

**Part 3: Clinical Evaluation of Employees Exposed to Inorganic Arsenic**

**Important:**

- When an employee will use a respirator during work, the LHCP will need to determine whether the employee can safely wear a respirator and what limitations, if any, apply.

**Guidance for Physical Examinators**

In addition to its immediate diagnostic usefulness, a patient's initial examination will provide a baseline for comparing future test results.

This chapter establishes the minimum content for medical examinations. Additional tests such as lateral and oblique X rays or pulmonary function test may be useful.

You should also include palpation of superficial lymph nodes and a complete blood count when employees are exposed to any of the following compounds:

- Copper aceto-arsenite;
- Potassium arsenite;
- Sodium arsenite;
- Other materials associated with lymphatic cancer.

Arsenic trioxide and other inorganic arsenical dusts do not give rise to radiological evidence or pneumoconiosis.

[Statutory Authority: RCW [49.17.010](#), [49.17.040](#), [49.17.050](#), [49.17.060](#). WSR 07-03-153, § 296-848-60020, filed 1/23/07, effective 6/1/07.]

# Appendix B

Construction Stormwater General Permit Transfer of Coverage Form

Storm Water Pollution Prevention Plan Template

Construction Stormwater General Permit

# Construction Stormwater General Permit Transfer of Coverage Form



# Instructions for Transfer of Coverage

## Construction Stormwater General Permit

### Instructions

This form is used to process two types of permit transfers: 1) Complete Transfer, or 2) Partial Transfer. Determine which type of transfer applies to your situation before filling out this form.

**1. Complete Transfer:** The original permittee has sold, or otherwise released control of the entire site to another party.

#### Required Paperwork for Complete Transfer:

- Either the current permittee, or the new permittee(s), must submit a complete and accurate Transfer of Coverage form to Ecology for each new party. The form must be signed by the current permittee **and** the new permittee.

**2. Partial Transfer:** The original permittee retains control over some portion of the site after selling or releasing control over a portion of the site.

#### Required Paperwork for Partial Transfer

- Either the current permittee or the new permittee(s) must submit a complete and accurate Transfer of Coverage Form for each new operator to Ecology. The form must be signed by the current permittee and the new permittee.
- For partial transfers, once all transfers are submitted, the original permittee should submit the Notice of Termination only if the portion(s) they still own or control have undergone final stabilization and meet the criteria for termination.

### For Your Information

- When this form is 1) completed, 2) signed by the current and new permittee, and 3) submitted to Ecology, permit transfers are effective on the date specified at the top of page 1 (unless Ecology notifies the current permittee and new permittee of its intention to revoke coverage under the General Permit or if Ecology sends notice that the application is incomplete). If no date for the transfer of coverage is specified, Ecology will use the date of the last signature.
- The new permittee should keep a copy of the signed Transfer of Coverage form (which serves as proof of permit coverage) until Ecology sends documentation in the mail.
- Following the transfer, the new permittee must either: (1) use the Stormwater Pollution Prevention Plan (SWPPP) developed by the original operator, and modified as necessary, or (2) develop and use a new SWPPP that meets the requirements of the Construction Stormwater General Permit.
- For projects for which the original permittee has completed a Proposed New Discharge to an Impaired Waterbody Form (ECY 070-399), or for projects that are operating on sites with soil or groundwater contamination: By completing the Transfer of Coverage form, the new permittee will adopt any special provisions made to protect water quality for sites that have existing contamination or that discharge to an impaired waterbody.

*To request ADA accommodation including materials in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call 877-833-6341.*

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# Transfer of Coverage

Permit # WAR \_\_\_\_\_

## Construction Stormwater General Permit

This form transfers permit coverage for all, or a portion of a site to one or more new operators.

Type of permit transfer (check one):  Partial transfer  Complete transfer

Specific date that permit responsibility, coverage, and liability is transferred to new operator: \_\_\_\_\_

*\*If no date is indicated Ecology will use date of last signature*

Please see instructions for details on type of transfer.

### Current Operator/Permittee Information

<b>For partial transfers:</b> •List <i>total size of project/site</i> remaining under your operational control following transfer: _____ acres. •List <i>total area of soil disturbance</i> remaining under your operational control following transfer: _____ acres. •Submitting this form meets the requirement to submit an updated NOI (General Permit Condition G9)			
Current Operator/Permittee Name:		Company:	
Business Phone:	Ext:	Mailing Address:	
Cell Phone:	Fax (optional):		
Email:	City:	State:	Zip+4:
<b>Signature*</b> (see signatory requirements in Section VIII):		Title:	
		Date:	

### New Operator/Permittee Information

<b>I. New Operator/Permittee</b> (Party with operational control over plans and specifications or day-to-day operational control of activities which ensure compliance with Stormwater Pollution Prevention Plan (SWPPP) and permit conditions. Ecology will send correspondence and permit fee invoices to the permittee on record.)			
Name:		Company:	
Business Phone:	Ext:	Unified Business Identifier (UBI): <i>(UBI is a nine-digit number used to identify a business entity. Write "none" if you do not have a UBI number.)</i>	
Cell Phone (Optional):	Fax (Optional):	E-mail:	
Mailing Address:	City:	State:	Zip + 4:
<b>II. Property Owner</b> (The party listed on the County Assessor's records as owner and taxpayer of the parcel[s] for which permit coverage is requested. Ecology will <i>not</i> send correspondence and permit fee invoices to the Property Owner. The Property Owner information will be used for emergency contact purposes.)			
Name:		Company:	
Business Phone:	Ext:	Unified Business Identifier (UBI): <i>(UBI is a nine-digit number used to identify a business entity. Write "none" if you do not have a UBI number.)</i>	
Cell Phone (Optional):	Fax (Optional):	E-mail:	
Mailing Address:	City:	State:	Zip + 4:

**III. On-Site Contact Person(s)** (Typically the Certified Erosion and Sediment Control Lead or Operator/Permittee)

Name:		Company:		
Business Phone:	Ext:	Mailing Address:		
Cell Phone:	Fax(Optional):	City:	State:	Zip+4:
Email:				

**IV. Site/Project Information**

Site or Project Name	Site Acreage Total size of your site/project (that <b>you</b> own/control): _____ acres. (Note: 1 acre = 43,560 ft <sup>2</sup> .)
Street Address or Location Description (If the site lacks a street address, list its specific location. For example, Intersection of Highway 61 and 34.)  _____	Total area of soil disturbance for your site/project over the life of the project: _____ acres. Include grading, equipment staging, excavation, borrow pit, material storage areas, dump areas, haul roads, side-cast areas, off-site construction support areas, and all other soil disturbance acreage associated with the project. (Note: 1 acre = 43,560 ft <sup>2</sup> )
Parcel ID#: _____ (Optional)	
Type of Construction Activity (check all that apply): <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Highway or Road (city ,county, state) <input type="checkbox"/> Utilities (specify): _____ <input type="checkbox"/> Other (specify): _____	
City (or nearest city): _____	Zip Code: _____
County: _____	Estimated project start-up date (mm/dd/yy): _____
	Estimated project completion date (mm/dd/yy): _____

Record the latitude and longitude of the *main entrance* to the site or the approximate center of site.

Latitude: \_\_\_\_\_ °N                      Longitude: \_\_\_\_\_ °W

**V. Existing Site Conditions**

- Are you aware of contaminated soils present on the site?  Yes  No
- Are you aware of groundwater contamination located within the site boundary?  Yes  No
- If you answered yes to questions 1 or 2, will any contaminated soils be disturbed or will any contaminated groundwater be discharged due to the proposed construction activity?  Yes  No

("Contaminated" and "contamination" here mean containing any hazardous substance (as defined in WAC 173-340-200) that does not occur naturally or occurs at greater than natural background levels.)

If you answered yes to Question 3, please provide detailed information with the NOI (as known and readily available) on the natures and extent of the contamination (concentrations, locations, and depth), as well as pollution prevention and/or treatment Best Management Practices (BMPs) proposed to control the discharge of soil and/or groundwater contaminants in stormwater. This should include information that would be included in related portions of the Stormwater Pollution Prevention Plan (SWPPP) that describe how contaminated and potentially contaminated construction stormwater and dewatering water will be managed.

## VI. WQWebDMR (Electronic Discharge Monitoring Reporting)

You must submit monthly discharge monitoring reports using Ecology's WQWebDMR system. To sign up for WQWebDMR, or to register a new site, go to <http://www.ecy.wa.gov/programs/wq/permits/paris/portal.html>. If you are unable to submit your DMRs electronically, you may contact Ecology to request a waiver. Ecology will generally only grant waiver requests to those permittees without internet access. Only a permittee or representative, designated in writing, may request access to or a waiver from WQWebDMR. To have the ability to use the system immediately, **you must submit the Electronic Signature Agreement with your transfer of coverage form**. If you have questions on this process, contact Ecology's WQWebDMR staff at [WebDMRPortal@ecy.wa.gov](mailto:WebDMRPortal@ecy.wa.gov) or 800/633-6193 or 360-407-7097 (local).

## VII. Discharge/Receiving Water Information

Indicate whether your site's stormwater and/or dewatering water could enter surface waters, **directly and/or indirectly**.

Water will discharge directly or indirectly (through a storm drain system or roadside ditch) into one or more surface waterbodies (wetlands, creeks, lakes, and all other surface waters and water courses).

If your discharge is to a storm sewer system, provide the name of the operator of the storm sewer system:  
(e.g., City of Tacoma): \_\_\_\_\_

Water will discharge to ground with 100% infiltration, with no potential to reach surface waters under any conditions.

If your project includes dewatering, you **must** include dewatering plans and discharge locations in your site Stormwater Pollution Prevention Plan.

### Location of Outfall into Surface Waterbody

Enter the outfall identifier code, waterbody name, and latitude/longitude of the point(s) where the site has the potential to discharge into a waterbody (the outfall). Enter all locations. See **illustration of Surface Waterbody Outfall locations at the end of this form**.

- Include the names and locations of both direct and indirect discharges to surface waterbodies, even if the risk of discharge is low or limited to periods of extreme weather. **Attach a separate list if necessary.**
- Give each point a unique 1-4 digit alpha numeric code. This code will be used for identifying these points in WQWebDMR.
- Some large construction projects (for example, subdivisions, roads, or pipelines) may discharge into several waterbodies.
- If the creek or tributary is unnamed, use a format such as "unnamed tributary to Deschutes River."
- If the site discharges to a stormwater conveyance system that in turn flows to a surface waterbody, include the surface waterbody name and location.

Outfall Identifier Code. These cannot be symbols. (Maximum of 4 characters).	Surface Waterbody Name at the Outfall	Latitude Decimal Degrees	Longitude Decimal Degrees
Example: 001A	Example: Puget Sound	47.5289247° N	-122.3123550° W
		° N	° W
		° N	° W
		° N	° W

If your site discharges to a waterbody that is on the impaired waterbodies list (e.g., 303[d] list) for turbidity, fine sediment, high pH, or phosphorus, Ecology will require additional documentation before issuing permit coverage and these sites will be subject to additional sampling and numeric effluent limits (per Permit Condition S8). Ecology will notify you if any additional sampling requirements apply. Information on impaired waterbodies is available online at: <http://www.ecy.wa.gov/programs/wq/303d/index.html>.

**Before signing, please use the following checklist to ensure this form is complete:**

- All spaces on this form have been completed. (Attach additional sheets if necessary)
- The transfer form has been signed by both the current permittee **and** the new permittee(s).
- The date permit responsibility was transferred is specified. (See Page 1)
- New Operator/Permittee: Before you submit this form to Ecology, please retain a copy for your records – this will serve as proof of permit coverage until documentation arrives from Ecology.
- For partial transfers: If the original permittee no longer owns or controls any portions of the site that meet the criteria for termination, the original permittee must submit a Notice of Termination to terminate permit coverage. (<http://www.ecy.wa.gov/biblio/ecy02087.html>)
- For sites with contaminated soils/groundwater or a new discharger to an impaired waterbody: Any special provisions to protect water quality put in place at the time of initial coverage have been reviewed and adopted by the new permittee.

Administrative Order Docket No. \_\_\_\_\_

**VIII. Certification of Permittee**

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

\_\_\_\_\_  
Printed/Typed Name

\_\_\_\_\_  
Company (operator/permittee only)

\_\_\_\_\_  
Title

\_\_\_\_\_  
*Signature of Operator/Permittee*

\_\_\_\_\_  
Date

**Signature of Operator/Permittee requirements:**

- A. For a corporation: By a responsible corporate officer.
- B. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively.
- C. For a municipality, state, federal, or other public facility: By either a principal executive officer or ranking elected official.

Please sign and return this document to the following address:

Washington Department of Ecology - Stormwater  
PO Box 47696  
Olympia, WA 98504-7696

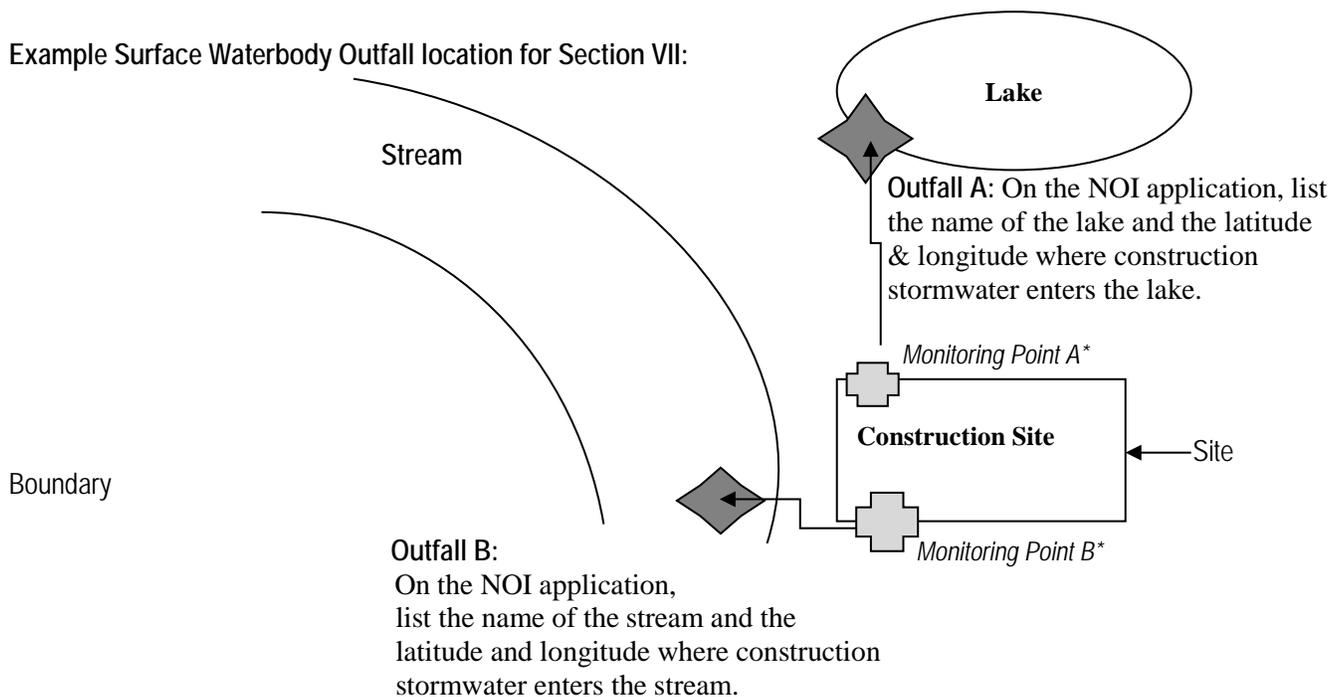
**If you have questions about this form, contact the following Ecology staff:**

Location	Contact Name	Phone	E-mail
City of Seattle, and Kitsap, Pierce, and Thurston counties	Josh Klimek	360-407-7451	<a href="mailto:josh.klimek@ecy.wa.gov">josh.klimek@ecy.wa.gov</a>
Island, King, and San Juan counties	RaChelle Stane	360-407-6556	<a href="mailto:rachelle.stane@ecy.wa.gov">rachelle.stane@ecy.wa.gov</a>
Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Skagit, Snohomish, Spokane, Stevens, Walla, Whatcom, and Whitman counties.	Shawn Hopkins	360-407-6442	<a href="mailto:shawn.hopkins@ecy.wa.gov">shawn.hopkins@ecy.wa.gov</a>
Benton, Chelan, Clallam, Clark, Cowlitz, Douglas, Grays Harbor, Jefferson, Kittitas, Klickitat, Lewis, Mason, Okanogan, Pacific, Skamania, Wahkiakum, and Yakima counties.	Joyce Smith	360-407-6858	<a href="mailto:joyce.smith@ecy.wa.gov">joyce.smith@ecy.wa.gov</a>

You must submit monthly discharge monitoring reports using Ecology's WQWebDMR system. To sign up for WQWebDMR, or to register a new site, go to [www.ecy.wa.gov/programs/wq/permits/paris/portal.html](http://www.ecy.wa.gov/programs/wq/permits/paris/portal.html). If you are unable to submit your DMRs electronically, you may contact Ecology to request a waiver. Ecology will generally only grant waiver requests to those permittees without internet access. Only a permittee or representative, designated in writing, may request access to or a waiver from WQWebDMR. To have the ability to use the system immediately, you must submit the **Electronic Signature Agreement with your application**.

If you have questions on this process, contact Ecology's WQWebDMR staff at [WQWebPortal@ecy.wa.gov](mailto:WQWebPortal@ecy.wa.gov) or 800-633-6193 or 360-407-7097 (local).

**Example Surface Waterbody Outfall location for Section VII:**



\*Note: The monitoring points are for illustration only and are not required on this Notice of Intent application form. Monitoring point information will be entered on the monthly discharge monitoring report as required for active permits.

*To request ADA accommodation including materials in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call 877-833-6341.*

# Storm Water Pollution Prevention Plan Template

## GENERAL INSTRUCTIONS AND CAVEATS

This template presents the recommended structure and content for preparation of a Construction Stormwater General Permit (CSWGP) Stormwater Pollution Prevention Plan (SWPPP).

The Washington State Department of Ecology's (Ecology) CSWGP requirements inform the structure and content of this SWPPP template; however, **you must customize this template to reflect the conditions of your site.**

A Construction Stormwater Site Inspection Form can be found on Ecology's website. <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

### Using the SWPPP Template

Each section will include instructions and space for information specific to your project. Please read the instructions for each section and provide the necessary information when prompted. This Word template can be modified electronically. You may add/delete text, copy and paste, edit tables, etc. Some sections may be completed with brief answers while others may require several pages of explanation.

### INSTRUCTIONS

Instructions are identified by gray shading, and **should be deleted upon SWPPP completion.**

**Delete this entire section upon SWPPP completion.**

**Use the F11 key for easier navigation through the form fields.**

After completing your template, and removing the gray instruction boxes, right-click anywhere on the Table of Contents and choose "Update Field", then choose "Update page numbers only", click "OK". Do the same for the list of Tables.

Follow this link to a copy of the Construction Stormwater General Permit: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

Construction Stormwater General Permit

# Stormwater Pollution Prevention Plan (SWPPP)

for  
[Insert Project Name]

Prepared for:  
The Washington State Department of Ecology  
*[Insert Ecology Regional Office Name]*

Permittee / Owner	Developer	Operator / Contractor
[Insert Name]	[Insert Name]	[Insert Name]

[Insert Project Site Location]

Update as necessary.

### Certified Erosion and Sediment Control Lead (CESCL)

Name	Organization	Contact Phone Number
[Insert Name]	[Insert Name]	[Insert Name]

### SWPPP Prepared By

Name	Organization	Contact Phone Number
[Insert Name]	[Insert Name]	[Insert Name]

### SWPPP Preparation Date

### Project Construction Dates

Activity / Phase	Start Date	End Date
[Insert Name]		

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- F.** 303(d) List Waterbodies / TMDL Waterbodies Information
- G.** Contaminated Site Information
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## List of Acronyms and Abbreviations

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<b>Acronym / Abbreviation</b>	<b>Explanation</b>
<b>303(d)</b>	Section of the Clean Water Act pertaining to Impaired Waterbodies
<b>BFO</b>	Bellingham Field Office of the Department of Ecology
<b>BMP(s)</b>	Best Management Practice(s)
<b>CESCL</b>	Certified Erosion and Sediment Control Lead
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>CRO</b>	Central Regional Office of the Department of Ecology
<b>CSWGP</b>	Construction Stormwater General Permit
<b>CWA</b>	Clean Water Act
<b>DMR</b>	Discharge Monitoring Report
<b>DO</b>	Dissolved Oxygen
<b>Ecology</b>	Washington State Department of Ecology
<b>EPA</b>	United States Environmental Protection Agency
<b>ERO</b>	Eastern Regional Office of the Department of Ecology
<b>ERTS</b>	Environmental Report Tracking System
<b>ESC</b>	Erosion and Sediment Control
<b>GULD</b>	General Use Level Designation
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NTU</b>	Nephelometric Turbidity Units
<b>NWRO</b>	Northwest Regional Office of the Department of Ecology
<b>pH</b>	Power of Hydrogen
<b>RCW</b>	Revised Code of Washington
<b>SPCC</b>	Spill Prevention, Control, and Countermeasure
<b>su</b>	Standard Units
<b>SWMMEW</b>	Stormwater Management Manual for Eastern Washington
<b>SWMMWW</b>	Stormwater Management Manual for Western Washington
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>TESC</b>	Temporary Erosion and Sediment Control
<b>SWRO</b>	Southwest Regional Office of the Department of Ecology
<b>TMDL</b>	Total Maximum Daily Load
<b>VFO</b>	Vancouver Field Office of the Department of Ecology
<b>WAC</b>	Washington Administrative Code
<b>WSDOT</b>	Washington Department of Transportation
<b>WWHM</b>	Western Washington Hydrology Model

# 1 Project Information

Project/Site Name:

Street/Location:

City:

State:

Zip code:

Subdivision:

Receiving waterbody:

## 1.1 Existing Conditions

Total acreage (including support activities such as off-site equipment staging yards, material storage areas, borrow areas).

Total acreage:

Disturbed acreage:

Existing structures:

Landscape

topography:

Drainage patterns:

Existing Vegetation:

Critical Areas (wetlands, streams, high erosion risk, steep or difficult to stabilize slopes):

List of known impairments for 303(d) listed or Total Maximum Daily Load (TMDL) for the receiving waterbody:

Table 1 includes a list of suspected and/or known contaminants associated with the construction activity.

List all known or suspected contaminants associated with this site in Table 1. Include contaminants previously remediated.

**Table 1 – Summary of Site Pollutant Constituents**

Constituent (Pollutant)	Location	Depth	Concentration

## 1.2 Proposed Construction Activities

Description of site development (example: subdivision):

Description of construction activities (example: site preparation, demolition, excavation):

Description of site drainage including flow from and onto adjacent properties. Must be consistent with Site Map in Appendix A:

Description of final stabilization (example: extent of revegetation, paving, landscaping):

*Contaminated Site Information:*

Proposed activities regarding contaminated soils or groundwater (example: on-site treatment system, authorized sanitary sewer discharge):

## 2 Construction Stormwater Best Management Practices (BMPs)

Describe the BMPs identified to control pollutants in stormwater discharges. Depending on the site, multiple BMPs for each element may be necessary. For each element identified:

- Clearly describe the control measure(s).
- Describe the implementation sequence.
- Describe the inspection and maintenance procedures for that specific BMP.
- Identify the responsible party for maintaining BMPs (if your SWPPP is shared by multiple operators, indicate the operator responsible for each BMP).

Categorize each BMP under one of the following elements as listed below:

1. Preserve Vegetation / Mark Clearing Limits
2. Establish Construction Access
3. Control Flow Rates
4. Install Sediment Controls
5. Stabilize Soils
6. Protect Slopes
7. Protect Drain Inlets
8. Stabilize Channels and Outfalls
9. Control Pollutants
10. Control Dewatering
11. Maintain BMPs
12. Manage the Project
13. Protect Low Impact Development

- BMPs must be consistent with the most current approved edition (at the time the CSWGP was issued) of the Stormwater Management Manual for Western Washington (SWMMWW) at sites west of the crest of the Cascade Mountains; the Stormwater Management Manual for Eastern Washington (SWMMEW) for sites east of the crest of the Cascade Mountains; or other Ecology-approved manual.
- Note the location of each BMP on your Site Map in Appendix A.
- Include the corresponding Ecology source control BMPs and runoff conveyance and treatment BMPs in Appendix B.
  - SWMMWW Volume II Chapter 4 Sections 4.1 and 4.2  
– <https://fortress.wa.gov/ecy/publications/SummaryPages/1410055.html> or
  - SWMMEW Chapter 7 Section 7.3.1 and 7.3.2  
– <http://www.ecy.wa.gov/biblio/0410076.html>

If it can be justified that a particular element does not apply to the project site, include a written justification in lieu of the BMP description in the text for the appropriate element.

The SWPPP is a living document reflecting current conditions and changes throughout the life of the project. These changes may be informal (i.e., hand-written notes and deletions). Update the SWPPP when the CESCL has noted a deficiency in BMPs or deviation from original design.

## **2.1 The 13 Elements**

### **2.1.1 Element 1: Preserve Vegetation / Mark Clearing Limits**

Describe the methods (signs, fences, etc.) you will use to protect those areas that should not be disturbed.

Describe natural features identified and how each will be protected during construction. Trees that are to be preserved, as well as all sensitive areas and their buffers, shall be clearly delineated, both in the field and on the plans.

Describe how natural vegetation and native topsoil will be preserved.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

## 2.1.2 Element 2: Establish Construction Access

Describe how you will minimize dust generation and vehicles tracking sediment off-site.

Limit vehicle access to one route, if possible.

Recycled concrete used to establish construction ingress or egress may be a stormwater pollutant source that requires treatment prior to discharge.

Street sweeping, street cleaning, or wheel wash/tire baths may be necessary if the stabilized construction access is not effective. All wheel wash wastewater shall be controlled on-site and CANNOT be discharged into waters of the State.

Install site ingress/egress stabilization BMPs according to BMP C105.

Describe how you will clean the affected roadway(s) from sediment which is tracked off-site.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### 2.1.3 Element 3: Control Flow Rates

Describe how you will protect properties and waterways downstream of the project from increased speed and volume of stormwater discharges due to construction activity.

Construction of stormwater retention and/or detention facilities must be done as one of the first steps in grading.

Assure that detention facilities are functioning properly before constructing site improvements (i.e., impervious surfaces).

If applicable, describe how you will protect areas designed for infiltration from siltation during the construction phase.

Will you construct stormwater retention and/or detention facilities?

Yes  No

Will you use permanent infiltration ponds or other low impact development (example: rain gardens, bio-retention, porous pavement) to control flow during construction?

Yes  No

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

#### **2.1.4 Element 4: Install Sediment Controls**

Describe how you will minimize sediment discharges from the site. Construct sediment control BMPs as one of the first steps of grading. These BMPs must be functional before other land disturbing activities – especially grading and filling – take place.

Describe the BMPs identified to filter sediment prior to it being discharged to an infiltration system or leaving the construction site.

Describe how you will direct stormwater for maximum infiltration where feasible.

Describe how you will not interfere with the movement of juvenile Salmonids attempting to enter off-channel areas or drainages.

Describe how you will respond if sediment controls are ineffective and turbid water is observed discharging from the site.

Consider the amount, frequency, intensity and duration of precipitation, soil characteristics, and site characteristics when selecting sediment control BMPs.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### 2.1.5 Element 5: Stabilize Soils

Describe how you will stabilize exposed and unworked soils throughout the life of the project (i.e., temporary and permanent seeding, mulching, erosion control fabrics, etc.).

Describe how you will stabilize soil stockpiles.

Describe how you will minimize the amount of soil exposed throughout the life of the project.

Describe how you will minimize the disturbance of steep slopes.

Describe how you will minimize soil compaction.

Describe how you will stabilize contaminated soil and contaminated soil stockpiles if applicable.

Exposed and unworked soils will be stabilized according to the time period set forth for dry and wet seasons, on the west or east sides of the crest of the Cascade Mountains.

Select your region's table and delete the others.

#### **West of the Cascade Mountains Crest**

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	May 1 – September 30	7 days
During the Wet Season	October 1 – April 30	2 days

#### **East of the Cascade Mountains Crest, except the Central Basin\***

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	July 1 – September 30	10 days
During the Wet Season	October 1 – June 30	5 days

#### **The Central Basin\*, East of the Cascade Mountain Crest**

Season	Dates	Number of Days Soils Can be Left Exposed
During the Dry Season	July 1 – September 30	30 days
During the Wet Season	October 1 – June 30	15 days

\*Note: The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

Soils must be stabilized at the end of the shift before a holiday or weekend if needed based on the weather forecast.

Anticipated project dates: Start date:                      End date:

Will you construct during the wet season?

Yes  No

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

## 2.1.6 Element 6: Protect Slopes

### West of the Cascade Mountains Crest

Describe how slopes will be designed, constructed, and protected to minimize erosion.

Temporary pipe slope drains must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used.

The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits.

For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates.

If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as “landscaped area”.

Describe how you will reduce scouring within constructed channels that are cut down a slope.

### East of the Cascade Mountain Crest

Describe how slopes will be designed, constructed, and protected to minimize erosion.

Temporary pipe slope drains must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.

Describe how you will reduce scouring within constructed channels that are cut down a slope.

Will steep slopes be present at the site during construction?

Yes  No

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### **2.1.7 Element 7: Protect Drain Inlets**

Describe how you will protect all operable storm drain inlets so that stormwater runoff does not enter the stormwater conveyance system.

Describe how you will remove sediment that enters the stormwater conveyance system (i.e., filtration, treatment, etc.).

Keep in mind inlet protection may function well for coarse sediment but is less effective in filtering finer particles and dissolved constituents. Inlet protection is the last component of a treatment train and protection of drain inlets include additional sediment and erosion control measures. Inlet protection devices will be cleaned (or removed and replaced), when sediment has filled the device by one third (1/3) or as specified by the manufacturer.

Inlets will be inspected weekly at a minimum and daily during storm events.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### **2.1.8 Element 8: Stabilize Channels and Outlets**

Describe how you will prevent downstream erosion where site runoff is to be conveyed in channels, discharged to a stream or, discharged to a natural drainage point.

#### **West of the Cascade Mountains Crest**

On-site conveyance channels must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used.

The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits.

For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates.

If using the WWHM to predict flows, bare soil areas should be modeled as “landscaped area”.

#### **East of the Cascade Mountain Crest**

On-site conveyance channels must handle the expected peak flow rate from a 6-month, 3-hour storm from the developed condition, referred to as the short duration storm.

Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches, will be installed at the outlets of all conveyance systems.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### 2.1.9 Element 9: Control Pollutants

The following pollutants are anticipated to be present on-site:

**Table 2 – Pollutants**

Pollutant (List pollutants and source, if applicable)

Describe how you will handle and dispose of all pollutants, including waste materials and demolition debris, in a manner that does not cause contamination of stormwater.

Describe how you will cover, contain, and protect from vandalism all chemicals, liquid products, petroleum products, and other polluting materials.

Describe how you will manage known contaminants to prevent their discharge with stormwater to waters of the State (i.e., treatment system, off-site disposal).

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

Will maintenance, fueling, and/or repair of heavy equipment and vehicles occur on-site?

Yes  No

If yes, describe spill prevention and control measures in place while conducting maintenance, fueling, and repair of heavy equipment and vehicles.

If yes, also provide the total volume of fuel on-site and capacity of the secondary containment for each fuel tank. Secondary containment structures shall be impervious.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

Will wheel wash or tire bath system BMPs be used during construction?

Yes  No

If yes, provide disposal methods for wastewater generated by BMPs.

If discharging to the sanitary sewer, include the approval letter from your local sewer district under Correspondence in Appendix C.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

Will pH-modifying sources be present on-site?

Yes  No      If yes, check the source(s).

**Table 3 – pH-Modifying Sources**

<input type="checkbox"/>	None
<input type="checkbox"/>	Bulk cement
<input type="checkbox"/>	Cement kiln dust
<input type="checkbox"/>	Fly ash
<input type="checkbox"/>	Other cementitious materials
<input type="checkbox"/>	New concrete washing or curing waters
<input type="checkbox"/>	Waste streams generated from concrete grinding and sawing
<input type="checkbox"/>	Exposed aggregate processes
<input type="checkbox"/>	Dewatering concrete vaults
<input type="checkbox"/>	Concrete pumping and mixer washout waters
<input type="checkbox"/>	Recycled concrete
<input type="checkbox"/>	Recycled concrete stockpiles
<input type="checkbox"/>	Other (i.e., calcium lignosulfate) [please describe:      ]

Describe BMPs you will use to prevent pH-modifying sources from contaminating stormwater.

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

Adjust pH of stormwater if outside the range of 6.5 to 8.5 su.

Obtain written approval from Ecology before using chemical treatment with the exception of CO<sub>2</sub> or dry ice to modify pH.

Concrete trucks must not be washed out onto the ground, or into storm drains, open ditches, streets, or streams. Excess concrete must not be dumped on-site, except in designated concrete washout areas with appropriate BMPs installed.

Will uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters?

Yes  No

If yes, provide BMPs to contain the wastewater during infiltration.

Prior to infiltration, water from water- only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### 2.1.10 Element 10: Control Dewatering

Describe where dewatering will occur, including source of the water to be removed. State clearly if dewatering water is contaminated or has the potential to be contaminated.

Water from foundations, vaults, and trenches with characteristics similar to stormwater runoff shall be discharged into a controlled conveyance system before discharging to a sediment trap or sediment pond. Clean dewatering water will not be routed through stormwater sediment ponds.

Only clean, non-turbid dewatering water (such as well-point groundwater) may be discharged to systems tributary to, or directly into, surface waters of the State, provided the dewatering flow does not cause erosion or flooding of receiving waters.

Describe how you will manage dewatering water to prevent the discharge of contaminants to waters of the State, including dewatering water that has comingled with stormwater (i.e., treatment system, off-site disposal).

[Insert text here]

Check treatment or disposal option for dewatering water, if applicable:

**Table 4 – Dewatering BMPs**

<input type="checkbox"/>	Infiltration
<input type="checkbox"/>	Transport off-site in a vehicle (vacuum truck for legal disposal)
<input type="checkbox"/>	Ecology-approved on-site chemical treatment or other suitable treatment technologies
<input type="checkbox"/>	Sanitary or combined sewer discharge with local sewer district approval (last resort)
<input type="checkbox"/>	Use of sedimentation bag with discharge to ditch or swale (small volumes of localized dewatering)

List and describe BMPs:

Installation Schedules:

Inspection and Maintenance plan:

Responsible Staff:

### **2.1.11 Element 11: Maintain BMPs**

This section is a list of permit requirements and does not have to be filled out.

All temporary and permanent Erosion and Sediment Control (ESC) BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function.

Maintenance and repair shall be conducted in accordance with each particular BMP specification (see *Volume II of the SWMMWW* or *Chapter 7 of the SWMMEW*).

Visual monitoring of all BMPs installed at the site will be conducted at least once every calendar week and within 24 hours of any stormwater or non-stormwater discharge from the site. If the site becomes inactive and is temporarily stabilized, the inspection frequency may be reduced to once every calendar month.

All temporary ESC BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed.

Trapped sediment shall be stabilized on-site or removed. Disturbed soil resulting from removal of either BMPs or vegetation shall be permanently stabilized.

Additionally, protection must be provided for all BMPs installed for the permanent control of stormwater from sediment and compaction. BMPs that are to remain in place following completion of construction shall be examined and restored to full operating condition. If sediment enters these BMPs during construction, the sediment shall be removed and the facility shall be returned to conditions specified in the construction documents.

### 2.1.12 Element 12: Manage the Project

The project will be managed based on the following principles:

- Projects will be phased to the maximum extent practicable and seasonal work limitations will be taken into account.
- Inspection and monitoring:
  - Inspection, maintenance and repair of all BMPs will occur as needed to ensure performance of their intended function.
  - Site inspections and monitoring will be conducted in accordance with Special Condition S4 of the CSWGP. Sampling locations are indicated on the Site Map. Sampling station(s) are located in accordance with applicable requirements of the CSWGP.
- Maintain an updated SWPPP.
  - The SWPPP will be updated, maintained, and implemented in accordance with Special Conditions S3, S4, and S9 of the CSWGP.

As site work progresses the SWPPP will be modified routinely to reflect changing site conditions. The SWPPP will be reviewed monthly to ensure the content is current.

Check all the management BMPs that apply at your site:

**Table 5 – Management**

<input type="checkbox"/>	Design the project to fit the existing topography, soils, and drainage patterns
<input type="checkbox"/>	Emphasize erosion control rather than sediment control
<input type="checkbox"/>	Minimize the extent and duration of the area exposed
<input type="checkbox"/>	Keep runoff velocities low
<input type="checkbox"/>	Retain sediment on-site
<input type="checkbox"/>	Thoroughly monitor site and maintain all ESC measures
<input type="checkbox"/>	Schedule major earthwork during the dry season
<input type="checkbox"/>	Other (please describe)





### 2.1.13 Element 13: Protect Low Impact Development (LID) BMPs

Describe LIDs.

Describe how you will protect LID facilities from sedimentation, protect soils from compaction, and maintain the infiltration capabilities.

Describe how you will clean permeable pavements fouled with sediments.

Permittees must protect all Bioretention and Rain Garden facilities from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden facilities. Restore the facilities to their fully functioning condition if they accumulate sediment during construction. Restoring the facility must include removal of sediment and any sediment-laden Bioretention/Rain Garden soils, and replacing the removed soils with soils meeting the design specification.

Permittees must maintain the infiltration capabilities of Bioretention and Rain Garden facilities by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.

Permittees must control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements.

Permittees must clean permeable pavements fouled with sediments or no longer passing an initial infiltration test using local stormwater manual methodology or the manufacturer's procedures.

Permittees must keep all heavy equipment off existing soils under LID facilities that have been excavated to final grade to retain the infiltration rate of the soils.

### 3 Pollution Prevention Team

Table 7 – Team Information

<b>Title</b>	<b>Name(s)</b>	<b>Phone Number</b>
<b>Certified Erosion and Sediment Control Lead (CESCL)</b>	[Insert Name]	[Insert Number]
<b>Resident Engineer</b>		
<b>Emergency Ecology Contact</b>		
<b>Emergency Permittee/ Owner Contact</b>		
<b>Non-Emergency Owner Contact</b>		
<b>Monitoring Personnel</b>		
<b>Ecology Regional Office</b>	[Insert Regional Office]	[Insert General Number]

## 4 Monitoring and Sampling Requirements

Monitoring includes visual inspection, sampling for water quality parameters of concern, and documentation of the inspection and sampling findings in a site log book. A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Stormwater sampling data

Create your own Site Inspection Form or use the Construction Stormwater Site Inspection Form found on Ecology's website. <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

File a blank form under Appendix D.

The site log book must be maintained on-site within reasonable access to the site and be made available upon request to Ecology or the local jurisdiction.

Numeric effluent limits may be required for certain discharges to 303(d) listed waterbodies. See CSWGP Special Condition S8 and Section 5 of this template.

### 4.1 Site Inspection

Site inspections will be conducted at least once every calendar week and within 24 hours following any discharge from the site. For sites that are temporarily stabilized and inactive, the required frequency is reduced to once per calendar month.

The discharge point(s) are indicated on the Site Map (see Appendix A) and in accordance with the applicable requirements of the CSWGP.

### 4.2 Stormwater Quality Sampling

#### 4.2.1 Turbidity Sampling

Requirements include calibrated turbidity meter or transparency tube to sample site discharges for compliance with the CSWGP. Sampling will be conducted at all discharge points at least once per calendar week.

Method for sampling turbidity:

Check the analysis method you will use:

**Table 8 – Turbidity Sampling Method**

<input type="checkbox"/>	Turbidity Meter/Turbidimeter (required for disturbances 5 acres or greater in size)
<input type="checkbox"/>	Transparency Tube (option for disturbances less than 1 acre and up to 5 acres in size)

The benchmark for turbidity value is 25 nephelometric turbidity units (NTU) and a transparency less than 33 centimeters.

If the discharge's turbidity is 26 to 249 NTU or the transparency is less than 33 cm but equal to or greater than 6 cm, the following steps will be conducted:

1. Review the SWPPP for compliance with Special Condition S9. Make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
2. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible. Address the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
3. Document BMP implementation and maintenance in the site log book.

If the turbidity exceeds 250 NTU or the transparency is 6 cm or less at any time, the following steps will be conducted:

1. Telephone or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) within 24 hours.
  - **Central Region** (Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima): (509) 575-2490  
or [http://www.ecy.wa.gov/programs/spills/forms/nerets\\_online/CRO\\_nerets\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerets_online/CRO_nerets_online.html)
  - **Eastern Region** (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400  
or [http://www.ecy.wa.gov/programs/spills/forms/nerets\\_online/ERO\\_nerets\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerets_online/ERO_nerets_online.html)
  - **Northwest Region** (King, Kitsap, Island, San Juan, Skagit, Snohomish, Whatcom): (425) 649-7000  
or [http://www.ecy.wa.gov/programs/spills/forms/nerets\\_online/NWRO\\_nerets\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerets_online/NWRO_nerets_online.html)
  - **Southwest Region** (Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum,): (360) 407-6300  
or [http://www.ecy.wa.gov/programs/spills/forms/nerets\\_online/SWRO\\_nerets\\_online.html](http://www.ecy.wa.gov/programs/spills/forms/nerets_online/SWRO_nerets_online.html)
2. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible. Address the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period
3. Document BMP implementation and maintenance in the site log book.
4. Continue to sample discharges daily until one of the following is true:
  - Turbidity is 25 NTU (or lower).
  - Transparency is 33 cm (or greater).
  - Compliance with the water quality limit for turbidity is achieved.
    - 1 - 5 NTU over background turbidity, if background is less than 50 NTU
    - 1% - 10% over background turbidity, if background is 50 NTU or greater
  - The discharge stops or is eliminated.

### 4.2.2 pH Sampling

pH monitoring is required for “Significant concrete work” (i.e., greater than 1000 cubic yards poured concrete over the life of the project). The use of recycled concrete or engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD] or fly ash) also requires pH monitoring.

For significant concrete work, pH sampling will start the first day concrete is poured and continue until it is cured, typically three (3) weeks after the last pour.

For engineered soils and recycled concrete, pH sampling begins when engineered soils or recycled concrete are first exposed to precipitation and continues until the area is fully stabilized.

If the measured pH is 8.5 or greater, the following measures will be taken:

1. Prevent high pH water from entering storm sewer systems or surface water.
2. Adjust or neutralize the high pH water to the range of 6.5 to 8.5 su using appropriate technology such as carbon dioxide (CO<sub>2</sub>) sparging (liquid or dry ice).
3. Written approval will be obtained from Ecology prior to the use of chemical treatment other than CO<sub>2</sub> sparging or dry ice.

Method for sampling pH:

Check the analysis method you will use:

**Table 9 – pH Sampling Method**

<input type="checkbox"/>	pH meter
<input type="checkbox"/>	pH test kit
<input type="checkbox"/>	Wide range pH indicator paper

## 5 Discharges to 303(d) or Total Maximum Daily Load (TMDL) Waterbodies

### 5.1 303(d) Listed Waterbodies

Circle the applicable answer, if necessary:

Is the receiving water 303(d) (Category 5) listed for turbidity, fine sediment, phosphorus, or pH?

Yes  No

List the impairment(s):

If yes, discharges must comply with applicable effluent limitations in S8.C and S8.D of the CWSGP.

### 5.2 TMDL Waterbodies

Waste Load Allocation for CWSGP discharges:

Describe the method(s) for TMDL compliance:

List and describe BMPs:

Discharges to TMDL receiving waterbodies will meet in-stream water quality criteria at the point of discharge.

The Construction Stormwater General Permit Proposed New Discharge to an Impaired Water Body form is included in Appendix F.

## **6 Reporting and Record Keeping**

### **6.1 Record Keeping**

This section does not need to be filled out. It is a list of reminders for the permittee.

#### **6.1.1 Site Log Book**

A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements
- Site inspections
- Sample logs

#### **6.1.2 Records Retention**

Records will be retained during the life of the project and for a minimum of three (3) years following the termination of permit coverage in accordance with Special Condition S5.C of the CSWGP.

Permit documentation to be retained on-site:

- CSWGP
- Permit Coverage Letter
- SWPPP
- Site Log Book

Permit documentation will be provided within 14 days of receipt of a written request from Ecology. A copy of the SWPPP or access to the SWPPP will be provided to the public when requested in writing in accordance with Special Condition S5.G.2.b of the CSWGP.

#### **6.1.3 Updating the SWPPP**

The SWPPP will be modified if:

- Found ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site.
- There is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

The SWPPP will be modified within seven (7) days if inspection(s) or investigation(s) determine additional or modified BMPs are necessary for compliance. An updated timeline for BMP implementation will be prepared.

## 6.2 Reporting

### 6.2.1 Discharge Monitoring Reports

Select and retain applicable paragraph.

**Cumulative soil disturbance is less than one (1) acre; therefore,** Discharge Monitoring Reports (DMRs) will not be submitted to Ecology because water quality sampling is not being conducted at the site.

Or

**Cumulative soil disturbance is one (1) acre or larger; therefore,** Discharge Monitoring Reports (DMRs) will be submitted to Ecology monthly. If there was no discharge during a given monitoring period the DMR will be submitted as required, reporting “No Discharge”. The DMR due date is fifteen (15) days following the end of each calendar month.

DMRs will be reported online through Ecology’s WQWebDMR System.

To sign up for WQWebDMR go to:

<http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html>

### 6.2.2 Notification of Noncompliance

If any of the terms and conditions of the permit is not met, and the resulting noncompliance may cause a threat to human health or the environment, the following actions will be taken:

1. Ecology will be notified within 24-hours of the failure to comply by calling the applicable Regional office ERTS phone number (Regional office numbers listed below).
2. Immediate action will be taken to prevent the discharge/pollution or otherwise stop or correct the noncompliance. If applicable, sampling and analysis of any noncompliance will be repeated immediately and the results submitted to Ecology within five (5) days of becoming aware of the violation.
3. A detailed written report describing the noncompliance will be submitted to Ecology within five (5) days, unless requested earlier by Ecology.

Specific information to be included in the noncompliance report is found in Special Condition S5.F.3 of the CSWGP.

Anytime turbidity sampling indicates turbidity is 250 NTUs or greater, or water transparency is 6 cm or less, the Ecology Regional office will be notified by phone within 24 hours of analysis as required by Special Condition S5.A of the CSWGP.

- **Central Region** at (509) 575-2490 for Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, or Yakima County

- **Eastern Region** at (509) 329-3400 for Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, or Whitman County
- **Northwest Region** at (425) 649-7000 for Island, King, Kitsap, San Juan, Skagit, Snohomish, or Whatcom County
- **Southwest Region** at (360) 407-6300 for Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, or Wahkiakum

Include the following information:

1. Your name and / Phone number
2. Permit number
3. City / County of project
4. Sample results
5. Date / Time of call
6. Date / Time of sample
7. Project name

In accordance with Special Condition S4.D.5.b of the CSWGP, the Ecology Regional office will be notified if chemical treatment other than CO<sub>2</sub> sparging is planned for adjustment of high pH water.

## A. Site Map

The site map must meet the requirements of Special Condition S9.E of the CSWGP

## B. BMP Detail

Insert BMPs specification sheets here.

Download BMPs from the Ecology Construction Stormwater website at:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

Select Resources and Guidance to find the links to the Stormwater Manuals.

## C. Correspondence

Ecology

EPA

Local Government

## D. Site Inspection Form

Create your own or download Ecology's template:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

Select Permit, Forms and Application to find the link to the Construction Stormwater Site Inspection Form.

## E. Construction Stormwater General Permit (CSWGP)

Download the CSWGP:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>

## F. 303(d) List Waterbodies / TMDL Waterbodies Information

Proposed New Discharge to an Impaired Water Body form  
SWPPP Addendum addressing impairment

## G. Contaminated Site Information

Administrative Order

Sanitary Discharge Permit

Soil Management Plan

Soil and Groundwater Reports

Maps and Figures Depicting Contamination

## H. Engineering Calculations

# Construction Stormwater General Permit

Issuance Date: November 18, 2015  
Effective Date: January 1, 2016  
Expiration Date: December 31, 2020

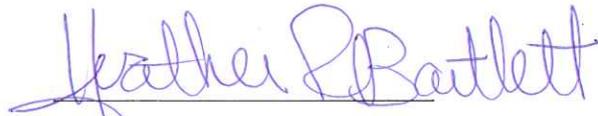
# CONSTRUCTION STORMWATER GENERAL PERMIT

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General  
Permit for Stormwater Discharges Associated with Construction Activity

**State of Washington**  
**Department of Ecology**  
Olympia, Washington 98504

In compliance with the provisions of  
Chapter 90.48 Revised Code of Washington  
(State of Washington Water Pollution Control Act)  
and  
Title 33 United States Code, Section 1251 et seq.  
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified, or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions that follow.



Heather R. Bartlett  
Water Quality Program Manager  
Washington State Department of Ecology

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## SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

**Table 1: Summary of Required Submittals**

Permit Section	Submittal	Frequency	First Submittal Date
<a href="#">S5.A</a> and <a href="#">S8</a>	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours
<a href="#">S5.B</a>	Discharge Monitoring Report	Monthly*	Within 15 days following the end of each month
<a href="#">S5.F</a> and <a href="#">S8</a>	Noncompliance Notification – Telephone Notification	As necessary	Within 24-hours
<a href="#">S5.F</a>	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non-compliance
<a href="#">S9.C</a>	Request for Chemical Treatment Form	As necessary	Written approval from Ecology is required prior to using chemical treatment (with the exception of dry ice or CO <sub>2</sub> to adjust pH)
<a href="#">G2</a>	Notice of Change in Authorization	As necessary	
<a href="#">G6</a>	Permit Application for Substantive Changes to the Discharge	As necessary	
<a href="#">G8</a>	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
<a href="#">G9</a>	Notice of Permit Transfer	As necessary	
<a href="#">G20</a>	Notice of Planned Changes	As necessary	
<a href="#">G22</a>	Reporting Anticipated Non-compliance	As necessary	

SPECIAL NOTE: \*Permittees must submit electronic Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology monthly, regardless of site discharge, for the full duration of permit coverage. Refer to Section S5.B of this General Permit for more specific information regarding DMRs.

**Table 2: Summary of Required On-site Documentation**

Document Title	Permit Conditions
Permit Coverage Letter	See Conditions <a href="#">S2</a> , <a href="#">S5</a>
Construction Stormwater General Permit	See Conditions <a href="#">S2</a> , <a href="#">S5</a>
Site Log Book	See Conditions <a href="#">S4</a> , <a href="#">S5</a>
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions <a href="#">S9</a> , <a href="#">S5</a>

## SPECIAL CONDITIONS

### S1. PERMIT COVERAGE

#### A. Permit Area

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal operators and Indian Country as specified in Special Condition S1.E.3.

#### B. Operators Required to Seek Coverage Under this General Permit:

1. Operators of the following construction activities are required to seek coverage under this CSWGP:
  - a. Clearing, grading and/or excavation that results in the disturbance of one or more acres (including off-site disturbance acreage authorized in S1.C.2) and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.
    - i. This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State (that is, forest practices that prepare a site for construction activities); and
  - b. Any size construction activity discharging stormwater to waters of the State that the Washington State Department of Ecology (Ecology):
    - i. Determines to be a significant contributor of pollutants to waters of the State of Washington.
    - ii. Reasonably expects to cause a violation of any water quality standard.
2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b. above):
  - a. Construction activities that discharge all stormwater and non-stormwater to ground water, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.
  - b. Construction activities covered under an Erosivity Waiver (Special Condition S2.C).
  - c. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

C. Authorized Discharges:

1. *Stormwater Associated with Construction Activity.* Subject to compliance with the terms and conditions of this permit, Permittees are authorized to discharge stormwater associated with construction activity to surface waters of the State or to a storm sewer system that drains to surface waters of the State. (Note that “surface waters of the State” may exist on a construction site as well as off site; for example, a creek running through a site.)
2. *Stormwater Associated with Construction Support Activity.* This permit also authorizes stormwater discharge from support activities related to the permitted construction site (for example, an on-site portable rock crusher, off-site equipment staging yards, material storage areas, borrow areas, etc.) provided:
  - a. The support activity relates directly to the permitted construction site that is required to have an NPDES permit; and
  - b. The support activity is not a commercial operation serving multiple unrelated construction projects, and does not operate beyond the completion of the construction activity; and
  - c. Appropriate controls and measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) for the discharges from the support activity areas.
3. *Non-Stormwater Discharges.* The categories and sources of non-stormwater discharges identified below are authorized conditionally, provided the discharge is consistent with the terms and conditions of this permit:
  - a. Discharges from fire-fighting activities.
  - b. Fire hydrant system flushing.
  - c. Potable water, including uncontaminated water line flushing.
  - d. Hydrostatic test water.
  - e. Uncontaminated air conditioning or compressor condensate.
  - f. Uncontaminated ground water or spring water.
  - g. Uncontaminated excavation dewatering water (in accordance with S9.D.10).
  - h. Uncontaminated discharges from foundation or footing drains.
  - i. Uncontaminated water used to control dust. Permittees must minimize the amount of dust control water used.
  - j. Routine external building wash down that does not use detergents.
  - k. Landscape irrigation water.

The SWPPP must adequately address all authorized non-stormwater discharges, except for discharges from fire-fighting activities, and must comply with Special Condition S3.

At a minimum, discharges from potable water (including water line flushing), fire hydrant system flushing, and pipeline hydrostatic test water must undergo the following: dechlorination to a concentration of 0.1 parts per million (ppm) or less, and pH adjustment to within 6.5 – 8.5 standard units (su), if necessary.

D. Prohibited Discharges:

The following discharges to waters of the State, including ground water, are prohibited.

1. Concrete wastewater.
2. Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.
3. Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.2 (see Appendix A of this permit).
4. Slurry materials and waste from shaft drilling, including process wastewater from shaft drilling for construction of building, road, and bridge foundations unless managed according to Special Condition S9.D.9.j.
5. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
6. Soaps or solvents used in vehicle and equipment washing.
7. Wheel wash wastewater, unless managed according to Special Condition S9.D.9.
8. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to Special Condition S9.D.10.

E. Limits on Coverage

Ecology may require any discharger to apply for and obtain coverage under an individual permit or another more specific general permit. Such alternative coverage will be required when Ecology determines that this CSWGP does not provide adequate assurance that water quality will be protected, or there is a reasonable potential for the project to cause or contribute to a violation of water quality standards.

The following stormwater discharges are not covered by this permit:

1. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site has undergone final stabilization.
2. Non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance, from which there is natural runoff as excluded in 40 CFR Subpart 122.
3. Stormwater from any federal operator.

4. Stormwater from facilities located on “Indian Country” as defined in 18 U.S.C. §1151, except portions of the Puyallup Reservation as noted below.

Indian Country includes:

- a. All land within any Indian Reservation notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. This includes all federal, tribal, and Indian and non-Indian privately owned land within the reservation.
- b. All off-reservation Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.
- c. All off-reservation federal trust lands held for Native American Tribes.

Puyallup Exception: Following the *Puyallup Tribes of Indians Land Settlement Act of 1989*, 25 U.S.C. §1773; the permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

5. Stormwater from any site covered under an existing NPDES individual permit in which stormwater management and/or treatment requirements are included for all stormwater discharges associated with construction activity.
6. Stormwater from a site where an applicable Total Maximum Daily Load (TMDL) requirement specifically precludes or prohibits discharges from construction activity.

## **S2. APPLICATION REQUIREMENTS**

### **A. Permit Application Forms**

1. Notice of Intent Form/Timeline
  - a. Operators of new or previously unpermitted construction activities must submit a complete and accurate permit application (Notice of Intent, or NOI) to Ecology.
  - b. Operators must apply using the electronic application form (NOI) available on Ecology’s website <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>. Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper NOI.

Department of Ecology  
Water Quality Program - Construction Stormwater  
PO Box 47696  
Olympia, Washington 98504-7696

- c. The operator must submit the NOI at least 60 days before discharging stormwater from construction activities and must submit it on or before the date of the first public notice (see Special Condition S2.B below for details). The 30-day public comment period begins on the publication date of the second public notice. Unless Ecology responds to the complete application in writing, based on public comments, or any other relevant factors, coverage under the general permit will automatically commence on the thirty-first day following receipt by Ecology of a completed NOI, or the issuance date of this permit, whichever is later; unless Ecology specifies a later date in writing as required by WAC173-226-200(2).
- d. If an applicant intends to use a Best Management Practice (BMP) selected on the basis of Special Condition S9.C.4 (“demonstrably equivalent” BMPs), the applicant must notify Ecology of its selection as part of the NOI. In the event the applicant selects BMPs after submission of the NOI, it must provide notice of the selection of an equivalent BMP to Ecology at least 60 days before intended use of the equivalent BMP.
- e. Permittees must notify Ecology regarding any changes to the information provided on the NOI by submitting an updated NOI. Examples of such changes include, but are not limited to:
  - i. Changes to the Permittee’s mailing address,
  - ii. Changes to the on-site contact person information, *and*
  - iii. Changes to the area/acreage affected by construction activity.
- f. Applicants must notify Ecology if they are aware of contaminated soils and/or groundwater associated with the construction activity. Provide detailed information with the NOI (as known and readily available) on the nature and extent of the contamination (concentrations, locations, and depth), as well as pollution prevention and/or treatment BMPs proposed to control the discharge of soil and/or groundwater contaminants in stormwater. Examples of such detail may include, but are not limited to:
  - i. List or table of all known contaminants with laboratory test results showing concentration and depth,
  - ii. Map with sample locations,
  - iii. Temporary Erosion and Sediment Control (TESC) plans,
  - iv. Related portions of the Stormwater Pollution Prevention Plan (SWPPP) that address the management of contaminated and potentially contaminated construction stormwater and dewatering water,
  - v. Dewatering plan and/or dewatering contingency plan.

## 2. Transfer of Coverage Form

The Permittee can transfer current coverage under this permit to one or more new operators, including operators of sites within a Common Plan of Development, provided the Permittee submits a Transfer of Coverage Form in accordance with General Condition G9. Transfers do not require public notice.

## B. Public Notice

For new or previously unpermitted construction activities, the applicant must publish a public notice at least one time each week for two consecutive weeks, at least 7 days apart, in a newspaper with general circulation in the county where the construction is to take place. The notice must contain:

1. A statement that “The applicant is seeking coverage under the Washington State Department of Ecology’s Construction Stormwater NPDES and State Waste Discharge General Permit”.
2. The name, address and location of the construction site.
3. The name and address of the applicant.
4. The type of construction activity that will result in a discharge (for example, residential construction, commercial construction, etc.), and the number of acres to be disturbed.
5. The name of the receiving water(s) (that is, the surface water(s) to which the site will discharge), or, if the discharge is through a storm sewer system, the name of the operator of the system.
6. The statement: “Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology’s action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320. Comments can be submitted to: Department of Ecology, PO Box 47696, Olympia, Washington 98504-7696 Attn: Water Quality Program, Construction Stormwater.”

### C. Erosivity Waiver

Construction site operators may qualify for an erosivity waiver from the CSWGP if the following conditions are met:

1. The site will result in the disturbance of fewer than 5 acres and the site is not a portion of a common plan of development or sale that will disturb 5 acres or greater.
2. Calculation of Erosivity “R” Factor and Regional Timeframe:
  - a. The project’s rainfall erosivity factor (“R” Factor) must be less than 5 during the period of construction activity, as calculated (see the CSWGP homepage <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html> for a link to the EPA’s calculator and step by step instructions on computing the “R” Factor in the EPA Erosivity Waiver Fact Sheet). The period of construction activity starts when the land is first disturbed and ends with final stabilization. In addition:
    - b. The entire period of construction activity must fall within the following timeframes:
      - i. For sites west of the Cascades Crest: June 15 – September 15.
      - ii. For sites east of the Cascades Crest, excluding the Central Basin: June 15 – October 15.
      - iii. For sites east of the Cascades Crest, within the Central Basin: no additional timeframe restrictions apply. The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches. For a map of the Central Basin (Average Annual Precipitation Region 2), refer to <http://www.ecy.wa.gov/programs/wq/stormwater/construction/resourcesguidance.html>.
3. Construction site operators must submit a complete Erosivity Waiver certification form at least one week before disturbing the land. Certification must include statements that the operator will:
  - a. Comply with applicable local stormwater requirements; *and*
  - b. Implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.
4. This waiver is not available for facilities declared significant contributors of pollutants as defined in Special Condition S1.B.1.b. or for any size construction activity that could reasonably expect to cause a violation of any water quality standard as defined in Special Condition S1.B.1.b.ii.
5. This waiver does not apply to construction activities which include non-stormwater discharges listed in Special Condition S1.C.3.

6. If construction activity extends beyond the certified waiver period for any reason, the operator must either:
  - a. Recalculate the rainfall erosivity “R” factor using the original start date and a new projected ending date and, if the “R” factor is still under 5 *and* the entire project falls within the applicable regional timeframe in Special Condition S2.C.2.b, complete and submit an amended waiver certification form before the original waiver expires; *or*
  - b. Submit a complete permit application to Ecology in accordance with Special Condition S2.A and B before the end of the certified waiver period.

### **S3. COMPLIANCE WITH STANDARDS**

- A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges not in compliance with these standards are not authorized.
- B. Prior to the discharge of stormwater and non-stormwater to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate SWPPP, with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- C. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully:
  1. Comply with all permit conditions, including planning, sampling, monitoring, reporting, and recordkeeping conditions.
  2. Implement stormwater BMPs contained in stormwater management manuals published or approved by Ecology, or BMPs that are demonstrably equivalent to BMPs contained in stormwater technical manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the Phase I Municipal Stormwater Permit are approved by Ecology.)
- D. Where construction sites also discharge to ground water, the ground water discharges must also meet the terms and conditions of this CSWGP. Permittees who discharge to ground water through an injection well must also comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC.

#### **S4. MONITORING REQUIREMENTS, BENCHMARKS, AND REPORTING TRIGGERS**

##### **A. Site Log Book**

The Permittee must maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

##### **B. Site Inspections**

The Permittee's site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points under the Permittee's operational control. (See Special Conditions S4.B.3 and B.4 below for detailed requirements of the Permittee's Certified Erosion and Sediment Control Lead [CESCL].)

Construction sites one acre or larger that discharge stormwater to surface waters of the State must have site inspections conducted by a certified CESCL. Sites less than one acre may have a person without CESCL certification conduct inspections.

1. The Permittee must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. The Permittee must evaluate the effectiveness of BMPs and determine if it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges.

Based on the results of the inspection, the Permittee must correct the problems identified by:

- a. Reviewing the SWPPP for compliance with Special Condition S9 and making appropriate revisions within 7 days of the inspection.
  - b. Immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.
  - c. Documenting BMP implementation and maintenance in the site log book.
2. The Permittee must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one day do not require daily inspections. For example, if a stormwater pond discharges continuously over the course of a week, only one inspection is required that week.) The Permittee may reduce the inspection frequency for temporarily stabilized, inactive sites to once every calendar month.

3. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL (sites one acre or more) or inspector (sites less than one acre) must have the skills to assess the:
  - a. Site conditions and construction activities that could impact the quality of stormwater, *and*
  - b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.
4. The SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times. The CESCL must obtain this certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the manual referred to in Special Condition S9.C.1 and 2).
5. The Permittee must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. At a minimum, each inspection report or checklist must include:
  - a. Inspection date and time.
  - b. Weather information, the general conditions during inspection and the approximate amount of precipitation since the last inspection, and precipitation within the last 24 hours.
  - c. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.
  - d. A description of the locations:
    - i. Of BMPs inspected;
    - ii. Of BMPs that need maintenance and why;
    - iii. Of BMPs that failed to operate as designed or intended; *and*
    - iv. Where additional or different BMPs are needed, and why.
  - e. A description of stormwater discharged from the site. The Permittee must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.
  - f. Any water quality monitoring performed during inspection.
  - g. General comments and notes, including a brief description of any BMP repairs, maintenance or installations made following the inspection.
  - h. A summary report and a schedule of implementation of the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the SWPPP and the permit.

- i. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement: “I certify that this report is true, accurate, and complete to the best of my knowledge and belief.”

**Table 3: Summary of Primary Monitoring Requirements**

Size of Soil Disturbance <sup>1</sup>	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling <sup>2</sup>	CESCL Required for Inspections?
Sites that disturb less than 1 acre, but are part of a larger Common Plan of Development	Required	Not Required	Not Required	Not Required	No
Sites that disturb 1 acre or more, but fewer than 5 acres	Required	Sampling Required – either method <sup>3</sup>		Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required <sup>4</sup>	Required	Yes

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<sup>1</sup> Soil disturbance is calculated by adding together all areas that will be affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

<sup>2</sup> If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of poured over the life of a project) or the use of recycled concrete or engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer stormwater collection system that drains to other surface waters of the State, the Permittee must conduct pH sampling in accordance with Special Condition S4.D.

<sup>3</sup> Sites with one or more acres, but fewer than 5 acres of soil disturbance, must conduct turbidity or transparency sampling in accordance with Special Condition S4.C.

<sup>4</sup> Sites equal to or greater than 5 acres of soil disturbance must conduct turbidity sampling using a turbidity meter in accordance with Special Condition S4.C.

## C. Turbidity/Transparency Sampling Requirements

### 1. Sampling Methods

- a. If construction activity involves the disturbance of 5 acres or more, the Permittee must conduct turbidity sampling per Special Condition S4.C.
- b. If construction activity involves 1 acre or more but fewer than 5 acres of soil disturbance, the Permittee must conduct either transparency sampling **or** turbidity sampling per Special Condition S4.C.

### 2. Sampling Frequency

- a. The Permittee must sample all discharge points at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state (for example, a creek running through a site); sampling is not required on sites that disturb less than an acre.
- b. Samples must be representative of the flow and characteristics of the discharge.
- c. Sampling is not required when there is no discharge during a calendar week.
- d. Sampling is not required outside of normal working hours or during unsafe conditions.
- e. If the Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly Discharge Monitoring Report (DMR).
- f. Sampling is not required before construction activity begins.
- g. The Permittee may reduce the sampling frequency for temporarily stabilized, inactive sites to once every calendar month.

### 3. Sampling Locations

- a. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state (for example, a creek running through a site).
- b. The Permittee may discontinue sampling at discharge points that drain areas of the project that are fully stabilized to prevent erosion.
- c. The Permittee must identify all sampling point(s) on the SWPPP site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.
- d. Sampling is not required for discharge that is sent directly to sanitary or combined sewer systems.

- e. The Permittee may discontinue sampling at discharge points in areas of the project where the Permittee no longer has operational control of the construction activity.
4. Sampling and Analysis Methods
- a. The Permittee performs turbidity analysis with a calibrated turbidity meter (turbidimeter) either on site or at an accredited lab. The Permittee must record the results in the site log book in nephelometric turbidity units (NTUs).
  - b. The Permittee performs transparency analysis on site with a 1¾-inch-diameter, 60-centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm).

**Table 4: Monitoring and Reporting Requirements**

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value	Phone Reporting Trigger Value
Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs	250 NTUs
Transparency	cm	Manufacturer instructions, or Ecology guidance	Weekly, if discharging	33 cm	6 cm

5. Turbidity/Transparency Benchmark Values and Reporting Triggers

The benchmark value for turbidity is 25 NTUs or less. The benchmark value for transparency is 33 centimeters (cm). Note: Benchmark values do not apply to discharges to segments of water bodies on Washington State’s 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus; these discharges are subject to a numeric effluent limit for turbidity. Refer to Special Condition S8 for more information.

a. Turbidity 26 – 249 NTUs, or Transparency 32 – 7 cm:

If the discharge turbidity is 26 to 249 NTUs; or if discharge transparency is less than 33 cm, but equal to or greater than 6 cm, the Permittee must:

- i. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
- ii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.

- iii. Document BMP implementation and maintenance in the site log book.
- b. Turbidity 250 NTUs or greater, or Transparency 6 cm or less:

If a discharge point's turbidity is 250 NTUs or greater, or if discharge transparency is less than or equal to 6 cm, the Permittee must complete the reporting and adaptive management process described below.

- i. Telephone or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) number (or through Ecology's Water Quality Permitting Portal [WQWebPortal] – Permit Submittals when the form is available) within 24 hours, in accordance with Special Condition S5.A.
  - Central Region (Okanogan, Chelan, Douglas, Kittitas, Yakima, Klickitat, Benton): (509) 575-2490
  - Eastern Region (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400
  - Northwest Region (Kitsap, Snohomish, Island, King, San Juan, Skagit, Whatcom): (425) 649-7000
  - Southwest Region (Grays Harbor, Lewis, Mason, Thurston, Pierce, Clark, Cowlitz, Skamania, Wahkiakum, Clallam, Jefferson, Pacific): (360) 407-6300

Links to these numbers and the ERTS reporting page are located on the following web site:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>.

- ii. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
- iii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
- iv. Document BMP implementation and maintenance in the site log book.
- v. Sample discharges daily until:
  - a) Turbidity is 25 NTUs (or lower); **or**
  - b) Transparency is 33 cm (or greater); **or**

- c) The Permittee has demonstrated compliance with the water quality limit for turbidity:
  - 1) No more than 5 NTUs over background turbidity, if background is less than 50 NTUs, *or*
  - 2) No more than 10% over background turbidity, if background is 50 NTUs or greater; *or*
- d) The discharge stops or is eliminated.

D. pH Sampling Requirements – Significant Concrete Work or Engineered Soils

If construction activity results in the disturbance of 1 acre or more, *and* involves significant concrete work (significant concrete work means greater than 1000 cubic yards poured concrete used over the life of a project ) or the use of recycled concrete or engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer system that drains to surface waters of the State, the Permittee must conduct pH sampling as set forth below. Note: In addition, discharges to segments of water bodies on Washington State’s 303(d) list (Category 5) for high pH are subject to a numeric effluent limit for pH; refer to Special Condition S8.

1. For sites with significant concrete work, the Permittee must begin the pH sampling period when the concrete is first poured and exposed to precipitation, and continue weekly throughout and after the concrete pour and curing period, until stormwater pH is in the range of 6.5 to 8.5 (su).
2. For sites with recycled concrete, the Permittee must begin the weekly pH sampling period when the recycled concrete is first exposed to precipitation and must continue until the recycled concrete is fully stabilized and stormwater pH is in the range of 6.5 to 8.5 (su).
3. For sites with engineered soils, the Permittee must begin the pH sampling period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.
4. During the applicable pH monitoring period defined above, the Permittee must obtain a representative sample of stormwater and conduct pH analysis at least once per week.
5. The Permittee must sample pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.
6. The benchmark value for pH is 8.5 standard units. Anytime sampling indicates that pH is 8.5 or greater, the Permittee must either:

- a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters; *or*
  - b. If necessary, adjust or neutralize the high pH water until it is in the range of pH 6.5 to 8.5 (su) using an appropriate treatment BMP such as carbon dioxide (CO<sub>2</sub>) sparging or dry ice. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO<sub>2</sub> sparging or dry ice.
7. The Permittee must perform pH analysis on site with a calibrated pH meter, pH test kit, or wide range pH indicator paper. The Permittee must record pH sampling results in the site log book.

## **S5. REPORTING AND RECORDKEEPING REQUIREMENTS**

### **A. High Turbidity Reporting**

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTUs or more (or transparency less than or equal to 6 cm) high turbidity reporting level, the Permittee must either call the applicable Ecology Region's Environmental Report Tracking System (ERTS) number by phone within 24 hours of analysis or submit an electronic ERTS report (or submit an electronic report through Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals when the form is available). See the CSWGP web site for links to ERTS and the WQWebPortal: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html>. Also, see phone numbers in Special Condition S4.C.5.b.i.

### **B. Discharge Monitoring Reports (DMRs)**

Permittees required to conduct water quality sampling in accordance with Special Conditions S4.C (Turbidity/Transparency), S4.D (pH), S8 (303[d]/TMDL sampling), and/or G13 (Additional Sampling) must submit the results to Ecology.

Permittees must submit monitoring data using Ecology's WQWebDMR web application accessed through Ecology's Water Quality Permitting Portal. To find out more information and to sign up for WQWebDMR go to: <http://www.ecy.wa.gov/programs/wq/permits/paris/portal.html>.

Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR at:

Department of Ecology  
Water Quality Program - Construction Stormwater  
PO Box 47696  
Olympia, Washington 98504-7696

Permittees who obtain a waiver not to use WQWebDMR must use the forms provided to them by Ecology; submittals must be mailed to the address above. Permittees shall

submit DMR forms to be received by Ecology within 15 days following the end of each month.

If there was no discharge during a given monitoring period, all Permittees must submit a DMR as required with "no discharge" entered in place of the monitoring results. DMRs are required for the full duration of permit coverage (from issuance date to termination). For more information, contact Ecology staff using information provided at the following web site: [www.ecy.wa.gov/programs/wq/permits/paris/contacts.html](http://www.ecy.wa.gov/programs/wq/permits/paris/contacts.html).

#### C. Records Retention

The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, copy of the permit coverage letter (including Transfer of Coverage documentation), and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of three years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this permit. This period of retention must be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

#### D. Recording Results

For each measurement or sample taken, the Permittee must record the following information:

1. Date, place, method, and time of sampling or measurement.
2. The first and last name of the individual who performed the sampling or measurement.
3. The date(s) the analyses were performed.
4. The first and last name of the individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

#### E. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S4 of this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Permittee's DMR.

#### F. Noncompliance Notification

In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment (such as but not limited to spills of fuels or other materials, catastrophic pond or slope failure, and discharges that violate water quality standards), or exceed

numeric effluent limitations (see S8. Discharges to 303(d) or TMDL Waterbodies), the Permittee must, upon becoming aware of the circumstance:

1. Notify Ecology within 24-hours of the failure to comply by calling the applicable Regional office ERTS phone number (refer to Special Condition S4.C.5.b.i. or [www.ecy.wa.gov/programs/wq/stormwater/construction/turbidity.html](http://www.ecy.wa.gov/programs/wq/stormwater/construction/turbidity.html) for Regional ERTS phone numbers).
2. Immediately take action to prevent the discharge/pollution, or otherwise stop or correct the noncompliance, and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to Ecology within five (5) days of becoming aware of the violation.
3. Submit a detailed written report to Ecology within five (5) days, of the time the Permittee becomes aware of the circumstances, unless requested earlier by Ecology. The report must be submitted using Ecology's Water Quality Permitting Portal (WQWebPortal) - Permit Submittals, unless a waiver from electronic reporting has been granted according to S5.B. The report must contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Permittee must report any unanticipated bypass and/or upset that exceeds any effluent limit in the permit in accordance with the 24-hour reporting requirement contained in 40 C.F.R. 122.41(l)(6).

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Upon request of the Permittee, Ecology may waive the requirement for a written report on a case-by-case basis, if the immediate notification is received by Ecology within 24 hours.

#### G. Access to Plans and Records

1. The Permittee must retain the following permit documentation (plans and records) on site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology or the local jurisdiction:
  - a. General Permit
  - b. Permit Coverage Letter
  - c. Stormwater Pollution Prevention Plan (SWPPP)
  - d. Site Log Book
2. The Permittee must address written requests for plans and records listed above (Special Condition S5.G.1) as follows:

- a. The Permittee must provide a copy of plans and records to Ecology within 14 days of receipt of a written request from Ecology.
- b. The Permittee must provide a copy of plans and records to the public when requested in writing. Upon receiving a written request from the public for the Permittee's plans and records, the Permittee must either:
  - i. Provide a copy of the plans and records to the requester within 14 days of a receipt of the written request; *or*
  - ii. Notify the requester within 10 days of receipt of the written request of the location and times within normal business hours when the plans and records may be viewed; and provide access to the plans and records within 14 days of receipt of the written request; *or*
  - iii. Within 14 days of receipt of the written request, the Permittee may submit a copy of the plans and records to Ecology for viewing and/or copying by the requester at an Ecology office, or a mutually agreed location. If plans and records are viewed and/or copied at a location other than at an Ecology office, the Permittee will provide reasonable access to copying services for which a reasonable fee may be charged. The Permittee must notify the requester within 10 days of receipt of the request where the plans and records may be viewed and/or copied.

## **S6. PERMIT FEES**

The Permittee must pay permit fees assessed by Ecology. Fees for stormwater discharges covered under this permit are established by Chapter 173-224 WAC. Ecology continues to assess permit fees until the permit is terminated in accordance with Special Condition S10 or revoked in accordance with General Condition G5.

## **S7. SOLID AND LIQUID WASTE DISPOSAL**

The Permittee must handle and dispose of solid and liquid wastes generated by construction activity, such as demolition debris, construction materials, contaminated materials, and waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, in accordance with:

- A. Special Condition S3, Compliance with Standards
- B. WAC 173-216-110
- C. Other applicable regulations

## **S8. DISCHARGES TO 303(d) OR TMDL WATERBODIES**

- A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-listed Waterbodies

1. Permittees who discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, must conduct water quality sampling according to the requirements of this section, and Special Conditions S4.C.2.b-f and S4.C.3.b-d, and must comply with the applicable numeric effluent limitations in S8.C and S8.D.
2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters (Category 5) that exists on January 1, 2016, or the date when the operator's complete permit application is received by Ecology, whichever is later.

**B. Limits on Coverage for New Discharges to TMDL or 303(d)-listed Waters**

Operators of construction sites that discharge to a TMDL or 303(d)-listed waterbody are not eligible for coverage under this permit *unless* the operator:

1. Prevents exposing stormwater to pollutants for which the waterbody is impaired, and retains documentation in the SWPPP that details procedures taken to prevent exposure on site; *or*
2. Documents that the pollutants for which the waterbody is impaired are not present at the site, and retains documentation of this finding within the SWPPP; *or*
3. Provides Ecology with data indicating the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data on site with the SWPPP. The operator must provide data and other technical information to Ecology that sufficiently demonstrate:
  - a. For discharges to waters without an EPA-approved or -established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the waterbody; *or*
  - b. For discharges to waters with an EPA-approved or -established TMDL, that there is sufficient remaining wasteload allocation in the TMDL to allow construction stormwater discharge and that existing dischargers to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards.

Operators of construction sites are eligible for coverage under this permit if Ecology issues permit coverage based upon an affirmative determination that the *discharge will not cause or contribute to the existing impairment.*

**C. Sampling and Numeric Effluent Limits for Discharges to Water Bodies on the 303(d) List for Turbidity, Fine Sediment, or Phosphorus**

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus must conduct turbidity sampling in accordance with Special Condition S4.C.2 and comply with either of the numeric effluent limits noted in Table 5 below.

2. As an alternative to the 25 NTUs effluent limit noted in Table 5 below (applied at the point where stormwater [or authorized non-stormwater] is discharged off-site), Permittees may choose to comply with the surface water quality standard for turbidity. The standard is: no more than 5 NTUs over background turbidity when the background turbidity is 50 NTUs or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTUs. In order to use the water quality standard requirement, the sampling must take place at the following locations:
  - a. Background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge.
  - b. Turbidity at the point of discharge into the 303(d)-listed receiving water, inside the area of influence of the discharge.
3. Discharges that exceed the numeric effluent limit for turbidity constitute a violation of this permit.
4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

**Table 5: Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters**

Parameter identified in 303(d) listing	Parameter Sampled	Unit	Analytical Method	Sampling Frequency	Numeric Effluent Limit <sup>1</sup>
<ul style="list-style-type: none"> <li>• Turbidity</li> <li>• Fine Sediment</li> <li>• Phosphorus</li> </ul>	Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs, at the point where stormwater is discharged from the site; OR In compliance with the surface water quality standard for turbidity (S8.C.2.a)

<sup>1</sup>Permittees subject to a numeric effluent limit for turbidity may, at their discretion, choose either numeric effluent limitation based on site-specific considerations including, but not limited to, safety, access and convenience.

**D. Discharges to Water Bodies on the 303(d) List for High pH**

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for high pH must conduct pH sampling in accordance with the table below, and comply with the numeric effluent limit of pH 6.5 to 8.5 su (Table 6).

**Table 6: pH Sampling and Limits for 303(d)-Listed Waters**

Parameter identified in 303(d) listing	Parameter Sampled/Units	Analytical Method	Sampling Frequency	Numeric Effluent Limit
High pH	pH /Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5

2. At the Permittee’s discretion, compliance with the limit shall be assessed at one of the following locations:
    - a. Directly in the 303(d)-listed waterbody segment, inside the immediate area of influence of the discharge; or
    - b. Alternatively, the Permittee may measure pH at the point where the discharge leaves the construction site, rather than in the receiving water.
  3. Discharges that exceed the numeric effluent limit for pH (outside the range of 6.5 – 8.5 su) constitute a violation of this permit.
  4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.
- E. Sampling and Limits for Sites Discharging to Waters Covered by a TMDL or Another Pollution Control Plan
1. Discharges to a waterbody that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL. Refer to <http://www.ecy.wa.gov/programs/wq/tmdl/TMDLsbyWria/TMDLbyWria.html> for more information on TMDLs.
    - a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges must be consistent with any specific waste load allocations or requirements established by the applicable TMDL.
      - i. The Permittee must sample discharges weekly or as otherwise specified by the TMDL to evaluate compliance with the specific waste load allocations or requirements.
      - ii. Analytical methods used to meet the monitoring requirements must conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.
    - b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but has not identified specific requirements,

compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.

- c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.
  - d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
2. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus that is completed and approved by EPA before January 1, 2016, or before the date the operator's complete permit application is received by Ecology, whichever is later. TMDLs completed after the operator's complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

## **S9. STORMWATER POLLUTION PREVENTION PLAN**

The Permittee must prepare and properly implement an adequate Stormwater Pollution Prevention Plan (SWPPP) for construction activity in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

A. The Permittee's SWPPP must meet the following objectives:

1. To implement best management practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.
2. To prevent violations of surface water quality, ground water quality, or sediment management standards.
3. To control peak volumetric flow rates and velocities of stormwater discharges.

B. General Requirements

1. The SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:
  - a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).
  - b. Potential erosion problem areas.
  - c. The 13 elements of a SWPPP in Special Condition S9.D.1-13, including BMPs used to address each element.

- d. Construction phasing/sequence and general BMP implementation schedule.
  - e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.
  - f. Engineering calculations for ponds, treatment systems, and any other designed structures.
2. The Permittee must modify the SWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:
- a. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the inspection or investigation.
  - b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.
  - c. Document BMP implementation and maintenance in the site log book.

The Permittee must modify the SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

### C. Stormwater Best Management Practices (BMPs)

BMPs must be consistent with:

- 1. Stormwater Management Manual for Western Washington (most current approved edition at the time this permit was issued), for sites west of the crest of the Cascade Mountains; *or*
- 2. Stormwater Management Manual for Eastern Washington (most current approved edition at the time this permit was issued), for sites east of the crest of the Cascade Mountains; *or*
- 3. Revisions to the manuals listed in Special Condition S9.C.1. & 2., or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230; *or*

4. Documentation in the SWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable Stormwater Management Manuals, including:
  - a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.
  - b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

#### D. SWPPP – Narrative Contents and Requirements

The Permittee must include each of the 13 elements below in Special Condition S9.D.1-13 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.

1. Preserve Vegetation/Mark Clearing Limits
  - a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.
  - b. Retain the duff layer, native topsoil, and natural vegetation in an undisturbed state to the maximum degree practicable.
2. Establish Construction Access
  - a. Limit construction vehicle access and exit to one route, if possible.
  - b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads.
  - c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.
  - d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.
  - e. Conduct street washing only after sediment removal in accordance with Special Condition S9.D.2.d. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.
3. Control Flow Rates
  - a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the

velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.

- b. Where necessary to comply with Special Condition S9.D.3.a, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (for example, impervious surfaces).
- c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from siltation during the construction phase.

#### 4. Install Sediment Controls

The Permittee must design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must design, install and maintain such controls to:

- a. Construct sediment control BMPs (sediment ponds, traps, filters, infiltration facilities, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.
- b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.
- c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Special Condition S9.D.3.a.
- d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
- e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.
- f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

#### 5. Stabilize Soils

- a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide

(PAM), the early application of gravel base on areas to be paved, and dust control.

- b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.
- c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.
- d. Depending on the geographic location of the project, the Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion:

West of the Cascade Mountains Crest

During the dry season (May 1 - September 30): 7 days

During the wet season (October 1 - April 30): 2 days

East of the Cascade Mountains Crest, except for Central Basin\*

During the dry season (July 1 - September 30): 10 days

During the wet season (October 1 - June 30): 5 days

The Central Basin\*, East of the Cascade Mountains Crest

During the dry season (July 1 - September 30): 30 days

During the wet season (October 1 - June 30): 15 days

\*Note: The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

- e. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.
  - f. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.
  - g. The Permittee must minimize the amount of soil exposed during construction activity.
  - h. The Permittee must minimize the disturbance of steep slopes.
  - i. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.
6. Protect Slopes
- a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).

- b. The Permittee must divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
  - c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.
    - i. West of the Cascade Mountains Crest: Temporary pipe slope drains must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."
    - ii. East of the Cascade Mountains Crest: Temporary pipe slope drains must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.
  - d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.
  - e. Place check dams at regular intervals within constructed channels that are cut down a slope.
7. Protect Drain Inlets
- a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
  - b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
8. Stabilize Channels and Outlets
- a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:
    - i. West of the Cascade Mountains Crest: Channels must handle the peak 10-minute flow rate from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land

cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "landscaped area."

- ii. East of the Cascade Mountains Crest: Channels must handle the expected peak flow rate from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.
- b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the outlets of all conveyance systems.

## 9. Control Pollutants

Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

- a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.
- b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.
- c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.
- d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application, or to the sanitary sewer with local sewer district approval.
- e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.
- f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, recycled concrete stockpiles, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete

pumping and mixer washout waters. (Also refer to the definition for "concrete wastewater" in Appendix A--Definitions.)

- g. Adjust the pH of stormwater or authorized non-stormwater if necessary to prevent an exceedance of groundwater and/or surface water quality standards.
- h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete trucks or concrete handling equipment onto the ground, or into storm drains, open ditches, streets, or streams. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge to surface waters of the State is prohibited.
- i. Obtain written approval from Ecology before using any chemical treatment, with the exception of CO<sub>2</sub> or dry ice used to adjust pH.
- j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).

#### 10. Control Dewatering

- a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, into a controlled conveyance system before discharge to a sediment trap or sediment pond.
- b. Permittees may discharge clean, non-turbid dewatering water, such as well-point ground water, to systems tributary to, or directly into surface waters of the State, as specified in Special Condition S9.D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.
- c. Other dewatering treatment or disposal options may include:
  - i. Infiltration.
  - ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.
  - iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies (see S9.D.9.i. regarding chemical treatment written approval).
  - iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.

- v. Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.
- d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

11. Maintain BMPs

- a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project

- a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.
- b. Inspection and monitoring – Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S4.
- c. Maintaining an updated construction SWPPP – Maintain, update, and implement the SWPPP in accordance with Special Conditions S3, S4 and S9.

13. Protect Low Impact Development (LID) BMPs

The primary purpose of LID BMPs/On-site LID Stormwater Management BMPs is to reduce the disruption of the natural site hydrology. LID BMPs are permanent facilities.

- a. Permittees must protect all Bioretention and Rain Garden facilities from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden facilities. Restore the facilities to their fully functioning condition if they accumulate sediment during construction. Restoring the facility must include removal of sediment and any sediment-laden Bioretention/Rain Garden soils, and replacing the removed soils with soils meeting the design specification.
- b. Permittees must maintain the infiltration capabilities of Bioretention and Rain Garden facilities by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.
- c. Permittees must control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy

construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements.

- d. Permittees must clean permeable pavements fouled with sediments or no longer passing an initial infiltration test using local stormwater manual methodology or the manufacturer's procedures.
- e. Permittees must keep all heavy equipment off existing soils under LID facilities that have been excavated to final grade to retain the infiltration rate of the soils.

#### E. SWPPP – Map Contents and Requirements

The Permittee's SWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The SWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions:

1. The direction of north, property lines, and existing structures and roads.
2. Cut and fill slopes indicating the top and bottom of slope catch lines.
3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.
4. Areas of soil disturbance and areas that will not be disturbed.
5. Locations of structural and nonstructural controls (BMPs) identified in the SWPPP.
6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.
7. Locations of all surface water bodies, including wetlands.
8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface waterbody, including wetlands.
9. Location of water quality sampling station(s), if sampling is required by state or local permitting authority.
10. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
11. Location or proposed location of LID facilities.

## **S10. NOTICE OF TERMINATION**

- A. The site is eligible for termination of coverage when it has met any of the following conditions:
1. The site has undergone final stabilization, the Permittee has removed all temporary BMPs (except biodegradable BMPs clearly manufactured with the intention for the material to be left in place and not interfere with maintenance or land use), and all stormwater discharges associated with construction activity have been eliminated; *or*
  2. All portions of the site that have not undergone final stabilization per Special Condition S10.A.1 have been sold and/or transferred (per General Condition G9), and the Permittee no longer has operational control of the construction activity; *or*
  3. For residential construction only, the Permittee has completed temporary stabilization and the homeowners have taken possession of the residences.
- B. When the site is eligible for termination, the Permittee must submit a complete and accurate Notice of Termination (NOT) form, signed in accordance with General Condition G2, to:

Department of Ecology  
Water Quality Program – Construction Stormwater  
PO Box 47696  
Olympia, Washington 98504-7696

When an electronic termination form is available, the Permittee may choose to submit a complete and accurate Notice of Termination (NOT) form through the Water Quality Permitting Portal rather than mailing a hardcopy as noted above.

The termination is effective on the thirty-first calendar day following the date Ecology receives a complete NOT form, unless Ecology notifies the Permittee that the termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees are required to comply with all conditions and effluent limitations in the permit until the permit has been terminated.

Permittees transferring the property to a new property owner or operator/Permittee are required to complete and submit the Notice of Transfer form to Ecology, but are not required to submit a Notice of Termination form for this type of transaction.

## GENERAL CONDITIONS

### G1. DISCHARGE VIOLATIONS

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the general permit must constitute a violation of the terms and conditions of this permit.

### G2. SIGNATORY REQUIREMENTS

- A. All permit applications must bear a certification of correctness to be signed:
1. In the case of corporations, by a responsible corporate officer;
  2. In the case of a partnership, by a general partner of a partnership;
  3. In the case of sole proprietorship, by the proprietor; *or*
  4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.
- B. All reports required by this permit and other information requested by Ecology (including NOIs, NOTs, and Transfer of Coverage forms) must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described above and submitted to Ecology.
  2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.
- C. Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section must make the following certification:

“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my

knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

### **G3. RIGHT OF INSPECTION AND ENTRY**

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.
- B. To have access to and copy – at reasonable times and at reasonable cost – any records required to be kept under the terms and conditions of this permit.
- C. To inspect – at reasonable times – any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor – at reasonable times – any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

### **G4. GENERAL PERMIT MODIFICATION AND REVOCATION**

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

- A. When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.
- B. When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.
- C. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, *or*
- D. When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

### **G5. REVOCATION OF COVERAGE UNDER THE PERMIT**

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the Director may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

- A. Violation of any term or condition of this permit.
- B. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.

- C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- D. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
- E. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
- F. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.
- G. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

The Director may require any discharger under this permit to apply for and obtain coverage under an individual permit or another more specific general permit. Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

#### **G6. REPORTING A CAUSE FOR MODIFICATION**

The Permittee must submit a new application, or a supplement to the previous application, whenever a material change to the construction activity or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least sixty (60) days prior to any proposed changes. Filing a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

#### **G7. COMPLIANCE WITH OTHER LAWS AND STATUTES**

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

#### **G8. DUTY TO REAPPLY**

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit. The Permittee must reapply using the electronic application form (NOI) available on Ecology's website. Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper NOI.

Department of Ecology  
Water Quality Program - Construction Stormwater  
PO Box 47696  
Olympia, Washington 98504-7696

## **G9. TRANSFER OF GENERAL PERMIT COVERAGE**

Coverage under this general permit is automatically transferred to a new discharger, including operators of lots/parcels within a common plan of development or sale, if:

- A. A written agreement (Transfer of Coverage Form) between the current discharger (Permittee) and new discharger, signed by both parties and containing a specific date for transfer of permit responsibility, coverage, and liability (including any Administrative Orders associated with the Permit) is submitted to the Director; and
- B. The Director does not notify the current discharger and new discharger of the Director's intent to revoke coverage under the general permit. If this notice is not given, the transfer is effective on the date specified in the written agreement.

When a current discharger (Permittee) transfers a portion of a permitted site, the current discharger must also submit an updated application form (NOI) to the Director indicating the remaining permitted acreage after the transfer.

## **G10. REMOVED SUBSTANCES**

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to the final effluent stream for discharge to state waters.

## **G11. DUTY TO PROVIDE INFORMATION**

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

## **G12. OTHER REQUIREMENTS OF 40 CFR**

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

## **G13. ADDITIONAL MONITORING**

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

## **G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS**

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment at the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

#### **G15. UPSET**

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Special Condition S5.F, and; 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

#### **G16. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort, or any exclusive privilege.

#### **G17. DUTY TO COMPLY**

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

#### **G18. TOXIC POLLUTANTS**

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

## **G19. PENALTIES FOR TAMPERING**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than \$20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

## **G20. REPORTING PLANNED CHANGES**

The Permittee must, as soon as possible, give notice to Ecology of planned physical alterations, modifications or additions to the permitted construction activity. The Permittee should be aware that, depending on the nature and size of the changes to the original permit, a new public notice and other permit process requirements may be required. Changes in activities that require reporting to Ecology include those that will result in:

- A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).
- B. A significant change in the nature or an increase in quantity of pollutants discharged, including but not limited to: for sites 5 acres or larger, a 20% or greater increase in acreage disturbed by construction activity.
- C. A change in or addition of surface water(s) receiving stormwater or non-stormwater from the construction activity.
- D. A change in the construction plans and/or activity that affects the Permittee's monitoring requirements in Special Condition S4.

Following such notice, permit coverage may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

## **G21. REPORTING OTHER INFORMATION**

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

## **G22. REPORTING ANTICIPATED NON-COMPLIANCE**

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least forty-five (45) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate

unavoidable interruption of operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

### **G23. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER THE PERMIT**

Any discharger authorized by this permit may request to be excluded from coverage under the general permit by applying for an individual permit. The discharger must submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons will fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director will either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to the construction stormwater general permit, the applicability of the construction stormwater general permit to that Permittee is automatically terminated on the effective date of the individual permit.

### **G24. APPEALS**

- A. The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.
- B. The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.
- C. The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

### **G25. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

### **G26. BYPASS PROHIBITED**

- A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater events below the design criteria for

stormwater management. Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, 3 or 4) is applicable.

1. Bypass of stormwater is consistent with the design criteria and part of an approved management practice in the applicable stormwater management manual.
2. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health.

3. Bypass of stormwater is unavoidable, unanticipated, and results in noncompliance of this permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
  - b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
  - c. Ecology is properly notified of the bypass as required in Special Condition S5.F of this permit.
4. A planned action that would cause bypass of stormwater and has the potential to result in noncompliance of this permit during a storm event.

The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

- a. A description of the bypass and its cause.
- b. An analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
- c. A cost-effectiveness analysis of alternatives including comparative resource damage assessment.
- d. The minimum and maximum duration of bypass under each alternative.
- e. A recommendation as to the preferred alternative for conducting the bypass.

- f. The projected date of bypass initiation.
  - g. A statement of compliance with SEPA.
  - h. A request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated.
  - i. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.
5. For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above must be considered during preparation of the Stormwater Pollution Prevention Plan (SWPPP) and must be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

Ecology will consider the following before issuing an administrative order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve, conditionally approve, or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

#### B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

## APPENDIX A – DEFINITIONS

**AKART** is an acronym for “all known, available, and reasonable methods of prevention, control, and treatment.” AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the *pollutants* and controlling pollution associated with a discharge.

**Applicable TMDL** means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which was completed and approved by EPA before January 1, 2016, or before the date the operator’s complete permit application is received by Ecology, whichever is later.

**Applicant** means an *operator* seeking coverage under this permit.

**Benchmark** means a *pollutant* concentration used as a permit threshold, below which a *pollutant* is considered unlikely to cause a water quality violation, and above which it may. When *pollutant* concentrations exceed benchmarks, corrective action requirements take effect. Benchmark values are not water quality standards and are not numeric effluent limitations; they are indicator values.

**Best Management Practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: *stormwater* associated with construction activity, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Buffer** means an area designated by a local *jurisdiction* that is contiguous to and intended to protect a sensitive area.

**Bypass** means the intentional diversion of waste streams from any portion of a treatment facility.

**Calendar Day** A period of 24 consecutive hours starting at 12:00 midnight and ending the following 12:00 midnight.

**Calendar Week** (same as **Week**) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

**Certified Erosion and Sediment Control Lead (CESCL)** means a person who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the SWMM).

**Chemical Treatment** means the addition of chemicals to *stormwater* and/or authorized non-stormwater prior to filtration and discharge to surface waters.

**Clean Water Act (CWA)** means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

**Combined Sewer** means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

**Common Plan of Development or Sale** means a site where multiple separate and distinct *construction activities* may be taking place at different times on different schedules and/or by different contractors, but still under a single plan. Examples include: 1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders); 2) a development plan that may be phased over multiple years, but is still under a consistent plan for long-term development; 3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility; and 4) linear projects such as roads, pipelines, or utilities. If the project is part of a common plan of development or sale, the disturbed area of the entire plan must be used in determining permit requirements.

**Composite Sample** means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots).

**Concrete Wastewater** means any water used in the production, pouring and/or clean-up of concrete or concrete products, and any water used to cut, grind, wash, or otherwise modify concrete or concrete products. Examples include water used for or resulting from concrete truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and road surfacing). When *stormwater* comingles with concrete wastewater, the resulting water is considered concrete wastewater and must be managed to prevent discharge to *waters of the State*, including *ground water*.

**Construction Activity** means land disturbing operations including clearing, grading or excavation which disturbs the surface of the land. Such activities may include road construction, construction of residential houses, office buildings, or industrial buildings, site preparation, soil compaction, movement and stockpiling of topsoils, and demolition activity.

**Contaminant** means any hazardous substance that does not occur naturally or occurs at greater than natural background levels. See definition of "*hazardous substance*" and WAC 173-340-200.

**Contaminated Groundwater** means groundwater which contains *contaminants*, *pollutants*, or *hazardous substances* that do not occur naturally or occur at levels greater than natural background.

**Contaminated Soil** means soil which contains *contaminants*, *pollutants*, or *hazardous substances* that do not occur naturally or occur at levels greater than natural background.

**Demonstrably Equivalent** means that the technical basis for the selection of all stormwater BMPs is documented within a SWPPP, including:

1. The method and reasons for choosing the stormwater BMPs selected.

2. The *pollutant* removal performance expected from the BMPs selected.
3. The technical basis supporting the performance claims for the BMPs selected, including any available data concerning field performance of the BMPs selected.
4. An assessment of how the selected BMPs will comply with state water quality standards.
5. An assessment of how the selected BMPs will satisfy both applicable federal technology-based treatment requirements and state requirements to use all known, available, and reasonable methods of prevention, control, and treatment (AKART).

**Department** means the Washington State Department of Ecology.

**Detention** means the temporary storage of *stormwater* to improve quality and/or to reduce the mass flow rate of discharge.

**Dewatering** means the act of pumping *ground water* or *stormwater* away from an active construction site.

**Director** means the Director of the Washington State Department of Ecology or his/her authorized representative.

**Discharger** means an owner or *operator* of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

**Domestic Wastewater** means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

**Ecology** means the Washington State Department of Ecology.

**Engineered Soils** means the use of soil amendments including, but not limited, to Portland cement treated base (CTB), cement kiln dust (CKD), or fly ash to achieve certain desirable soil characteristics.

**Equivalent BMPs** means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to *surface water* or to *ground water* than BMPs selected from the SWMM.

**Erosion** means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

**Erosion and Sediment Control BMPs** means BMPs intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, sediment traps, and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

**Federal Operator** is an entity that meets the definition of “*Operator*” in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of

the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

**Final Stabilization** (same as **fully stabilized** or **full stabilization**) means the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (examples of permanent non-vegetative stabilization methods include, but are not limited to riprap, gabions or geotextiles) which prevents erosion.

**Ground Water** means water in a saturated zone or stratum beneath the land surface or a surface waterbody.

**Hazardous Substance** means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous substance as defined in RCW 70.105.010(10) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director by rule to present a threat to human health or the environment if released into the environment. The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

**Injection Well** means a well that is used for the subsurface emplacement of fluids. (See Well.)

**Jurisdiction** means a political unit such as a city, town or county; incorporated for local self-government.

**National Pollutant Discharge Elimination System (NPDES)** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of *pollutants* to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington State Department of Ecology.

**Notice of Intent (NOI)** means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

**Notice of Termination (NOT)** means a request for termination of coverage under this general permit as specified by Special Condition S10 of this permit.

**Operator** means any party associated with a construction project that meets either of the following two criteria:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

**Permittee** means individual or entity that receives notice of coverage under this general permit.

**pH** means a liquid's measure of acidity or alkalinity. A pH of 7 is defined as neutral. Large variations above or below this value are considered harmful to most aquatic life.

**pH Monitoring Period** means the time period in which the pH of *stormwater* runoff from a site must be tested a minimum of once every seven days to determine if *stormwater* pH is between 6.5 and 8.5.

**Point Source** means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which *pollutants* are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture. (See Fact Sheet for further explanation.)

**Pollutant** means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill material discharged in accordance with a permit issued under section 404 of the CWA.

**Pollution** means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any *waters of the State* as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

**Process Wastewater** means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. If *stormwater* commingles with process wastewater, the commingled water is considered process wastewater.

**Receiving Water** means the waterbody at the point of discharge. If the discharge is to a *storm sewer system*, either surface or subsurface, the receiving water is the waterbody to which the storm system discharges. Systems designed primarily for other purposes such as for ground water drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey *stormwater* are considered the receiving water.

**Representative** means a *stormwater* or wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate *composite sample*, or a flow proportionate sample. Ecology's Construction Stormwater Monitoring Manual provides guidance on representative sampling.

**Responsible Corporate Officer** for the purpose of signatory authority means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

**Sanitary Sewer** means a sewer which is designed to convey domestic wastewater.

**Sediment** means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

**Sedimentation** means the depositing or formation of sediment.

**Sensitive Area** means a waterbody, wetland, stream, aquifer recharge area, or channel migration zone.

**SEPA** (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

**Significant Amount** means an amount of a *pollutant* in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a *pollutant* that has a reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

**Significant Concrete Work** means greater than 1000 cubic yards poured concrete used over the life of a project.

**Significant Contributor of Pollutants** means a facility determined by Ecology to be a contributor of a significant amount(s) of a *pollutant*(s) to waters of the State of Washington.

**Site** means the land or water area where any "facility or activity" is physically located or conducted.

**Source Control BMPs** means physical, structural or mechanical devices or facilities that are intended to prevent *pollutants* from entering *stormwater*. A few examples of source control

BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the *sanitary sewer* or a dead end sump.

**Stabilization** means the application of appropriate BMPs to prevent the erosion of soils, such as, temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

**Storm Drain** means any drain which drains directly into a *storm sewer system*, usually found along roadways or in parking lots.

**Storm Sewer System** means a means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains designed or used for collecting or conveying *stormwater*. This does not include systems which are part of a *combined sewer* or Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

**Stormwater** means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface waterbody, or a constructed infiltration facility.

**Stormwater Management Manual (SWMM) or Manual** means the technical Manual published by Ecology for use by local governments that contain descriptions of and design criteria for BMPs to prevent, control, or treat *pollutants* in *stormwater*.

**Stormwater Pollution Prevention Plan (SWPPP)** means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of *stormwater*.

**Surface Waters of the State** includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the State of Washington.

**Temporary Stabilization** means the exposed ground surface has been covered with appropriate materials to provide temporary stabilization of the surface from water or wind erosion. Materials include, but are not limited to, mulch, riprap, erosion control mats or blankets and temporary cover crops. Seeding alone is not considered stabilization. Temporary stabilization is not a substitute for the more permanent "*final stabilization*."

**Total Maximum Daily Load (TMDL)** means a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single *pollutant* from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the waterbody can be protected in case there are unforeseen events or unknown sources of the *pollutant*. The calculation must also account for seasonable variation in water quality.

**Transfer of Coverage (TOC)** means a request for transfer of coverage under this general permit as specified by General Condition G9 of this permit.

**Treatment BMPs** means BMPs that are intended to remove *pollutants* from *stormwater*. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

**Transparency** means a measurement of water clarity in centimeters (cm), using a 60 cm transparency tube. The transparency tube is used to estimate the relative clarity or transparency of water by noting the depth at which a black and white Secchi disc becomes visible when water is released from a value in the bottom of the tube. A transparency tube is sometimes referred to as a “turbidity tube.”

**Turbidity** means the clarity of water expressed as nephelometric turbidity units (NTUs) and measured with a calibrated turbidimeter.

**Uncontaminated** means free from any contaminant. See definition of “*contaminant*” and WAC 173-340-200.

**Waste Load Allocation (WLA)** means the portion of a receiving water’s loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

**Water-only Based Shaft Drilling** is a shaft drilling process that uses water only and no additives are involved in the drilling of shafts for construction of building, road, or bridge foundations.

**Water quality** means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

**Waters of the State** includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

**Well** means a bored, drilled or driven shaft, or dug hole whose depth is greater than the largest surface dimension. (See Injection well.)

**Wheel Wash Wastewater** means any water used in, or resulting from the operation of, a tire bath or wheel wash (BMP C106: Wheel Wash), or other structure or practice that uses water to physically remove mud and debris from vehicles leaving a construction site and prevent track-out onto roads. When *stormwater* combines with wheel wash wastewater, the resulting water is considered wheel wash wastewater and must be managed according to Special Condition S9.D.9.

## APPENDIX B – ACRONYMS

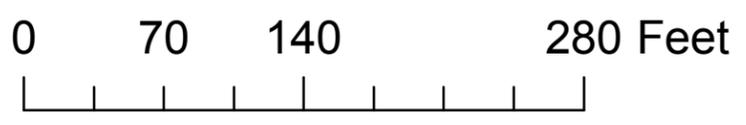
<b>AKART</b>	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
<b>BMP</b>	Best Management Practice
<b>CESCL</b>	Certified Erosion and Sediment Control Lead
<b>CFR</b>	Code of Federal Regulations
<b>CKD</b>	Cement Kiln Dust
<b>cm</b>	Centimeters
<b>CTB</b>	Cement-Treated Base
<b>CWA</b>	Clean Water Act
<b>DMR</b>	Discharge Monitoring Report
<b>EPA</b>	Environmental Protection Agency
<b>ERTS</b>	Environmental Report Tracking System
<b>ESC</b>	Erosion and Sediment Control
<b>FR</b>	Federal Register
<b>LID</b>	Low Impact Development
<b>NOI</b>	Notice of Intent
<b>NOT</b>	Notice of Termination
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NTU</b>	Nephelometric Turbidity Unit
<b>RCW</b>	Revised Code of Washington
<b>SEPA</b>	State Environmental Policy Act
<b>SWMM</b>	Stormwater Management Manual
<b>SWPPP</b>	Stormwater Pollution Prevention Plan
<b>TMDL</b>	Total Maximum Daily Load
<b>UIC</b>	Underground Injection Control
<b>USC</b>	United States Code
<b>USEPA</b>	United States Environmental Protection Agency
<b>WAC</b>	Washington Administrative Code
<b>WQ</b>	Water Quality
<b>WWHM</b>	Western Washington Hydrology Model

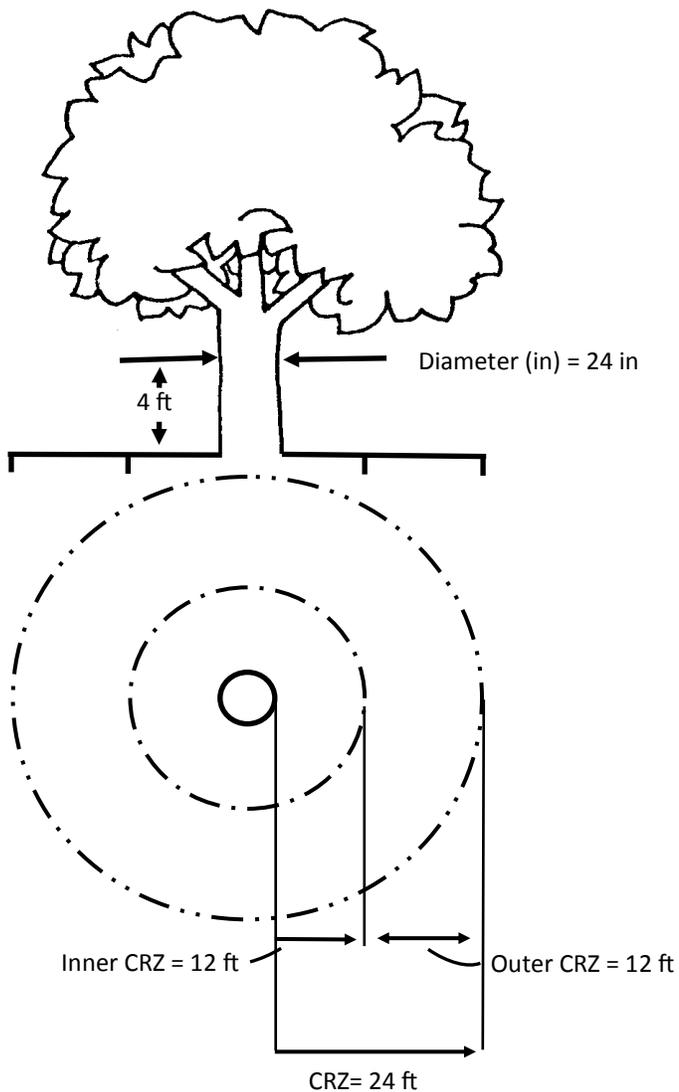
# Appendix D

Construction Drawings



Figure 1  
2017 Cleanup Group





### Critical Root Zone (CRZ)

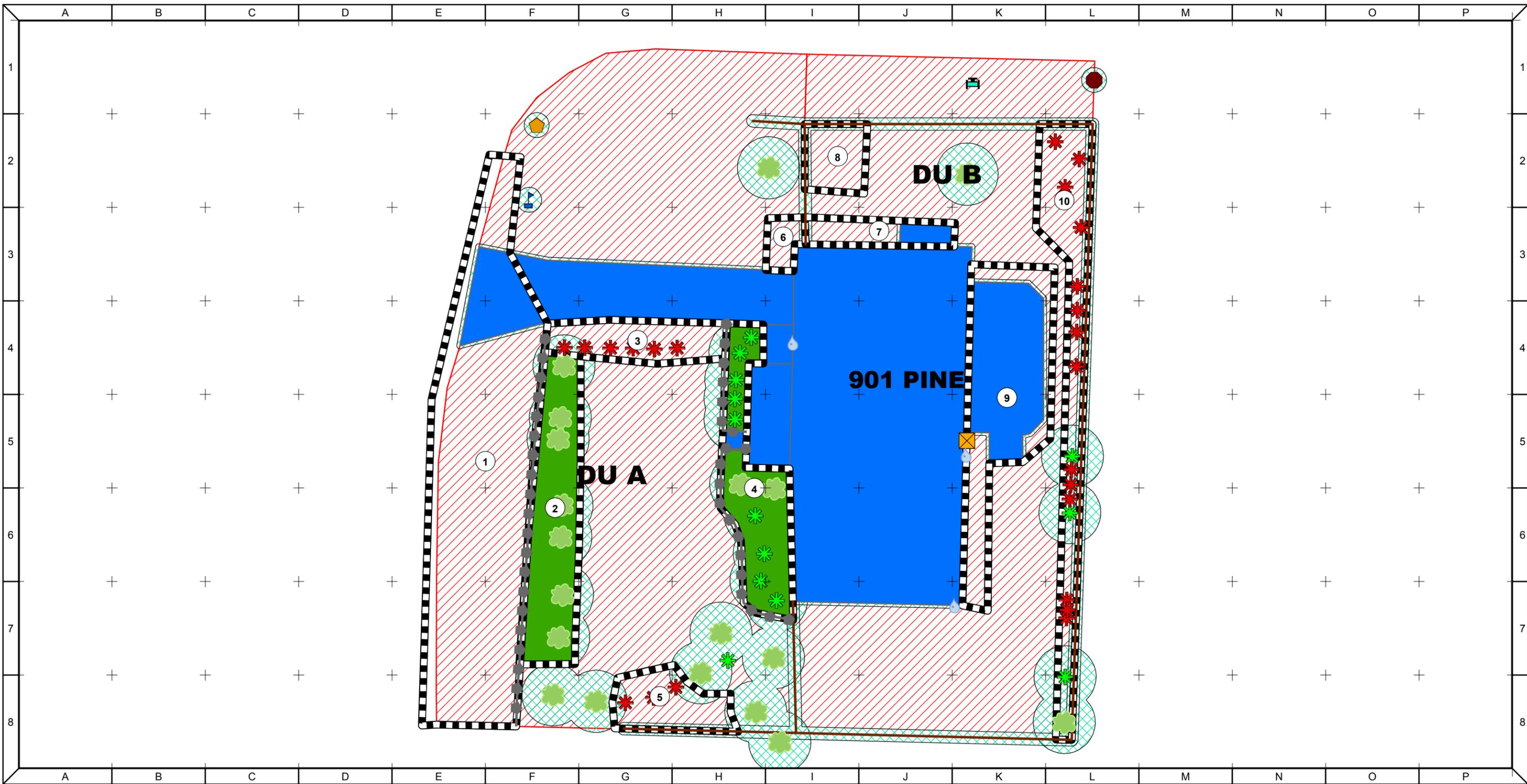
- Diameter is measured 4 feet above ground level.
- The diameter at 4 feet (in inches) is converted to the CRZ (in feet).
  - For example, a diameter of 24 inches creates a CRZ of 24 feet.
- Contractor shall delineate the CRZ of individual trees or around groups of trees using plainly visible markings.
- Use only hand methods for topsoil placement inside the CRZ.

### Outer CRZ

- Contractor shall excavate carefully, using hand tools as needed or as requested by Ecology.
- Contractor shall avoid damaging any tree roots, particularly those larger than 2 inches in diameter.
- If roots larger than 2 inches are encountered, the Contractor shall not excavate any closer to the base of the tree from that direction. Excavation shall continue from a different direction as the tree roots allow.
- Surface restoration shall match surrounding areas up to the edge of the Interior CRZ (unless otherwise specified).

### Inner CRZ

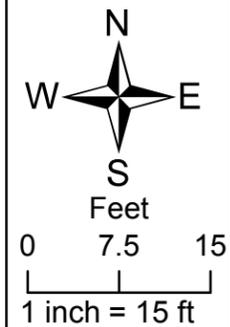
- Contractor shall remove only sod or other surface covering, provided that it is possible to do so without exposing or damaging roots.
- Little soil shall be removed to avoid damaging the tree roots.
- Unless otherwise specified, surface restoration shall be topsoil and landscape bark.

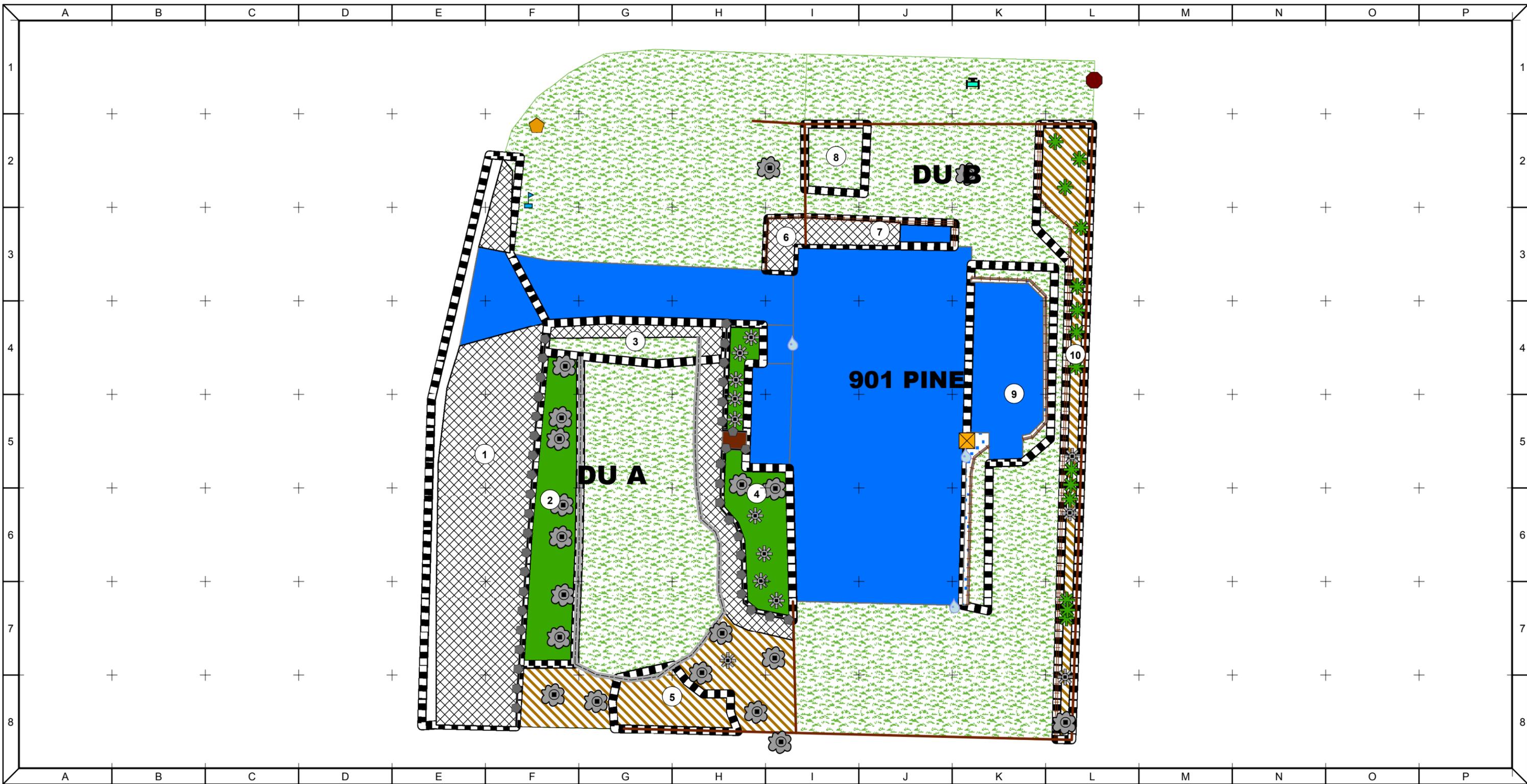


**901 PINE**  
**Dorothy Johnson**  
**Excavation Plan**  
**Figure 3a**

**Legend**

- |                   |                |               |                           |                    |
|-------------------|----------------|---------------|---------------------------|--------------------|
| Crawlspace Access | Plant (Retain) | Tree (Retain) | Landscape Areas to Remain | Typical Excavation |
| Mailbox           | Utility Pole   | Water Meter   | Permanent Site Features   |                    |
| Plant (Remove)    | Street Sign    | Fence         | Reduced Dig               |                    |
|                   | Spigot         | Rock Border   |                           |                    |
|                   |                | Detail Area   |                           |                    |





**901 PINE**  
**Dorothy Johnson**  
**Restoration Plan**  
**Figure 3b**

- Legend**
- |                   |                |                |             |               |                            |
|-------------------|----------------|----------------|-------------|---------------|----------------------------|
| Crawlspace Access | Retained Plant | Retained Tree  | Fence       | Crushed Rock  | Undisturbed Landscape Area |
| Mailbox           | Utility Pole   | Water Meter    | Rock Border | River Rock    | Permanent Site Feature     |
| Replaced Plant    | Street Sign    | Wood Border    | Detail Area | Sod           |                            |
|                   | Spigot         | Plastic Border | Wood Steps  | Landscape Bed |                            |

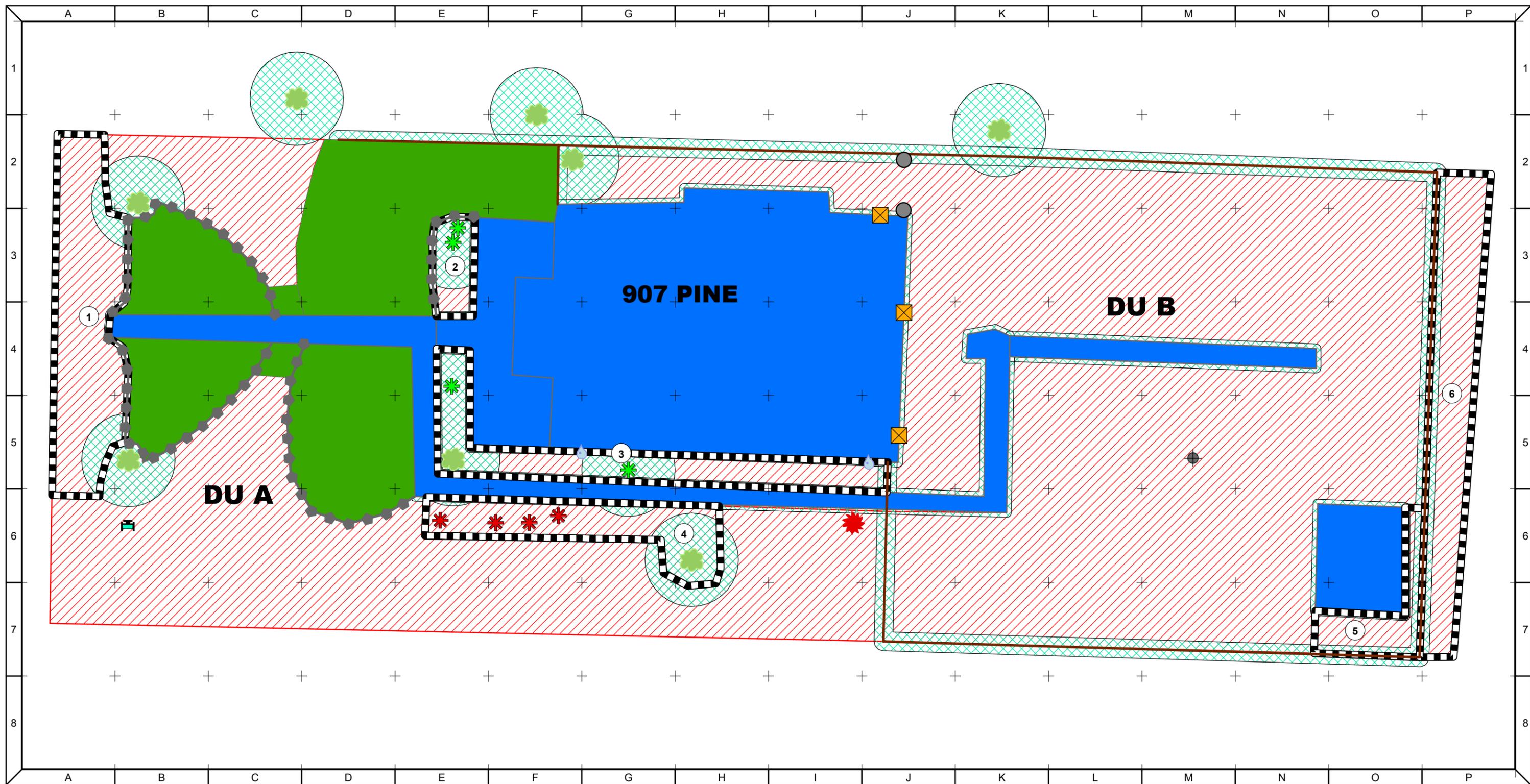


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Feet

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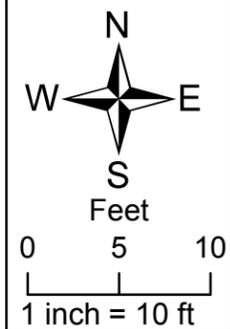
1 inch = 15 ft

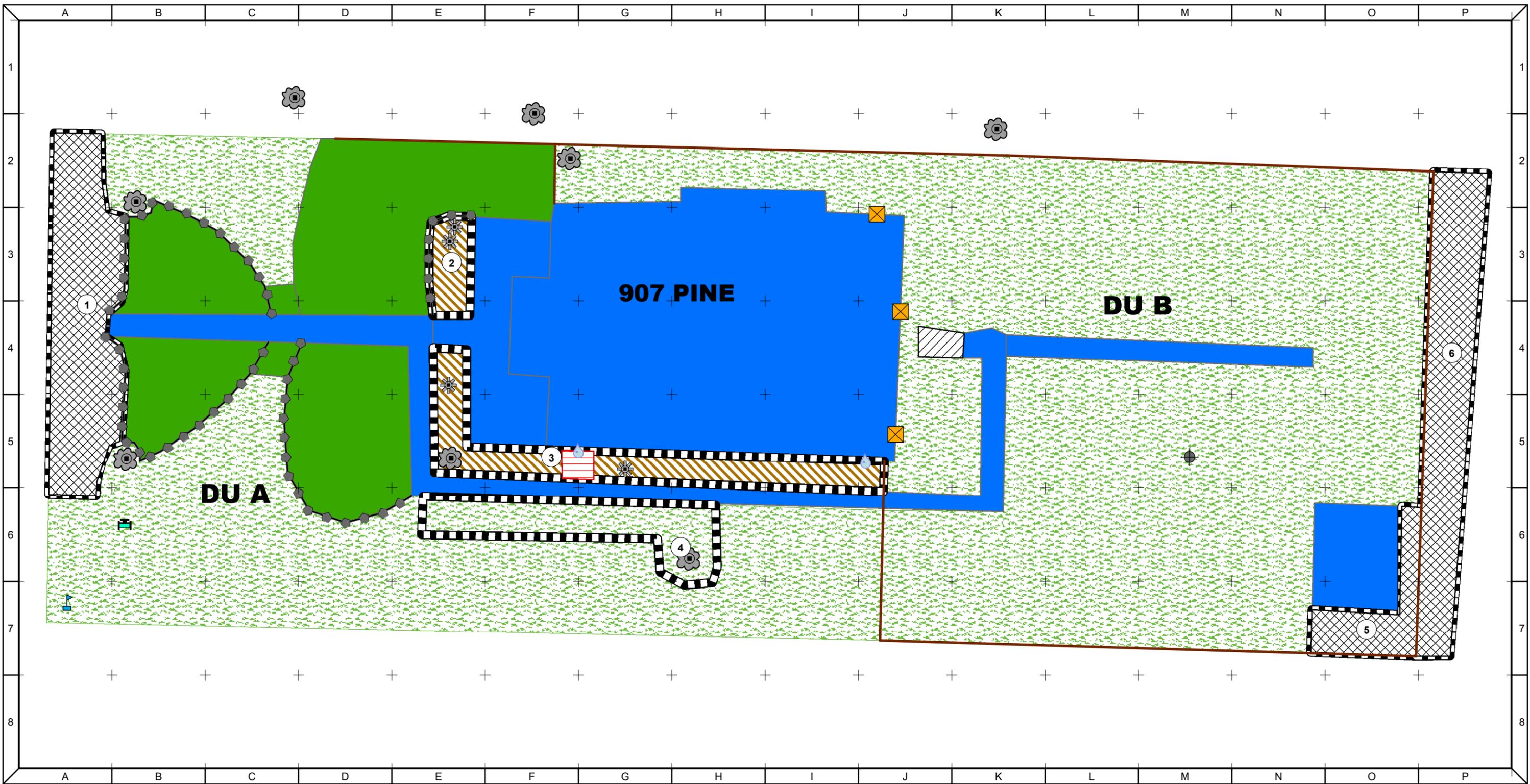


**907 PINE**  
**David & Dawn Slocum**  
**Excavation Plan**  
**Figure 4a**

**Legend**

- |                   |                     |               |                           |                    |
|-------------------|---------------------|---------------|---------------------------|--------------------|
| Crawlspace Access | Metal Post (Remove) | Tree (Retain) | Landscape Areas to Remain | Typical Excavation |
| Plant (Remove)    | Boulder             | Water Meter   | Permanent Site Features   |                    |
| Plant (Retain)    | Spigot              | Fence         | Detail Area               |                    |
|                   | Stump (Remove)      | Rock Border   | Reduced Dig               |                    |

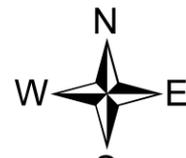




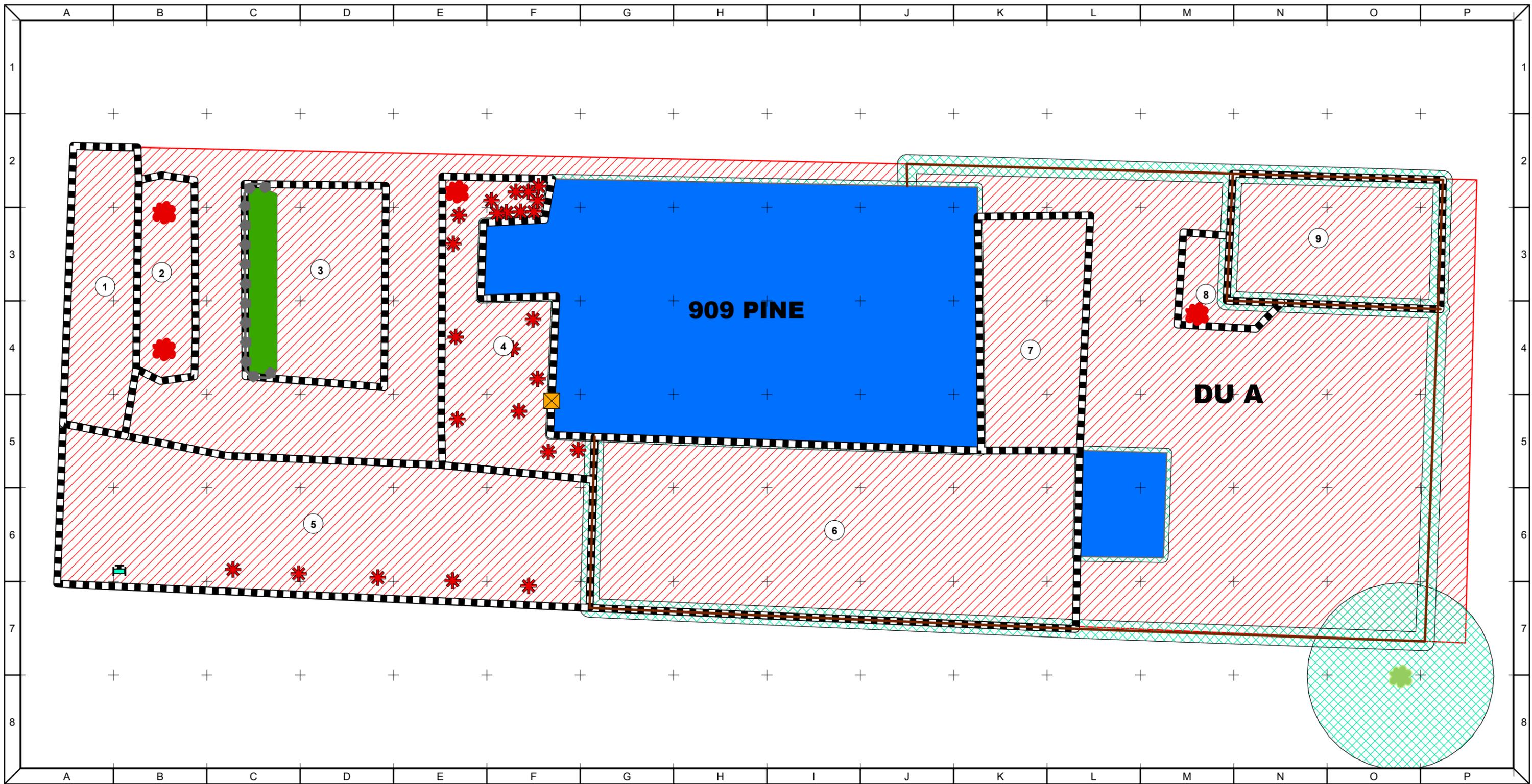
**907 PINE**  
**David & Dawn Slocum**  
**Restoration Plan**  
**Figure 4b**

- Legend**
- Crawlspace Access
  - Spigot
  - Rock Border
  - Pavers
  - Permanent Site Feature
  - Mailbox
  - Retained Tree
  - Detail Area
  - Brick Pavers
  - Retained Plant
  - Landscape Bed
  - Sod
  - Boulder
  - Fence
  - Crushed Rock
  - Undisturbed Landscape Area





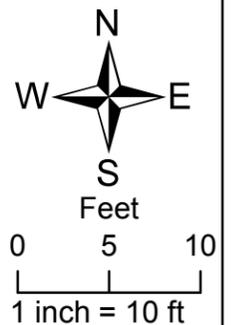
0 5 10  
 Feet  
 1 inch = 10 ft



**909 PINE**  
**Gerry Donathan**  
**& Jennifer McKinney**  
**Excavation Plan**  
**Figure 5a**

**Legend**

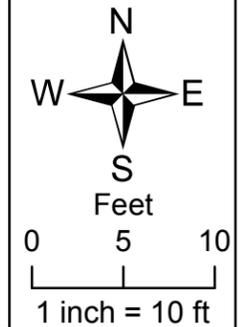
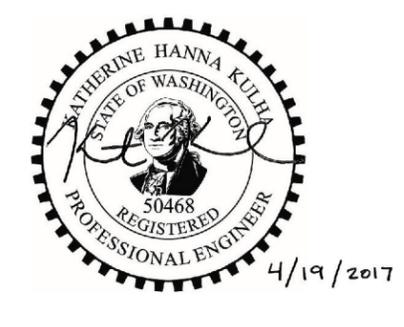
- |                   |                        |                           |                         |
|-------------------|------------------------|---------------------------|-------------------------|
| Crawlspace Access | Tree (Remove); TREE, 2 | Fence                     | Permanent Site Features |
| Plant (Remove)    | Tree (Retain)          | Rock Border               | Reduced Dig             |
| Water Meter       | Detail Area            | Landscape Areas to Remain | Typical Excavation      |

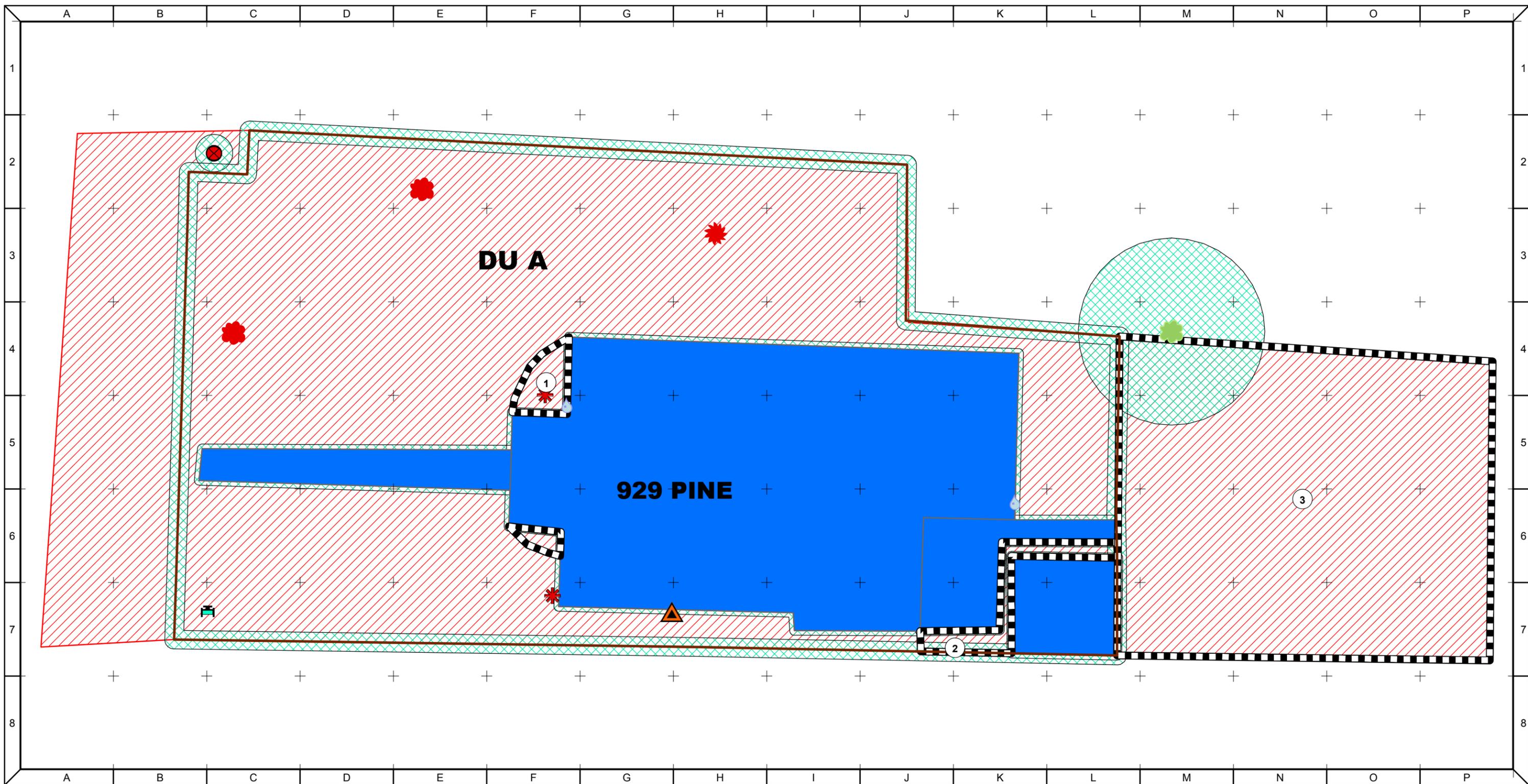




**909 PINE**  
**Gerry Donathan**  
**& Jennifer McKinney**  
**Restoration Plan**  
**Figure 5b**

- Legend**
- |                   |               |             |               |                        |                            |                        |
|-------------------|---------------|-------------|---------------|------------------------|----------------------------|------------------------|
| Crawlspace Access | Retained Tree | Wood Border | Landscape Bed | River Rock             | Sod                        | Permanent Site Feature |
| Mailbox           | Replaced Tree | Fence       | Crushed Rock  | Common Fill Full Depth | Undisturbed Landscape Area |                        |
| Replaced Plant    | Water Meter   | Rock Border | Pea Gravel    | No Backfill            |                            |                        |
|                   | Detail Area   |             |               |                        |                            |                        |

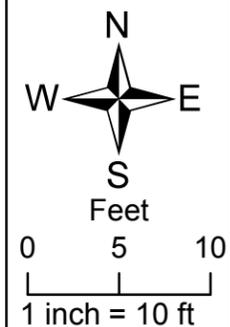


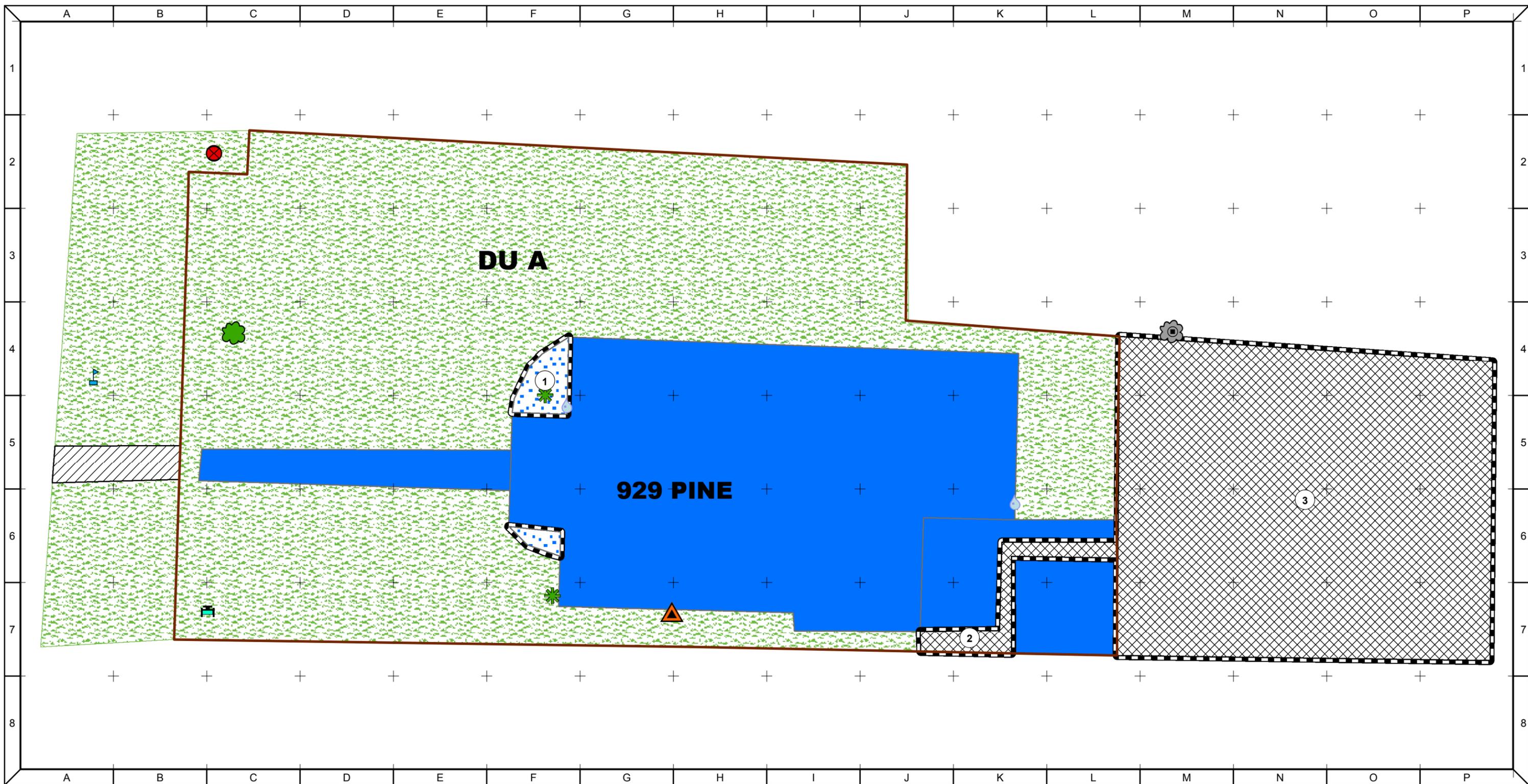


**929 PINE**  
**Brian & Maryanne Coffman**  
**Excavation Plan**  
**Figure 6a**

**Legend**

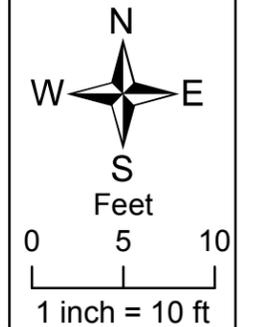
- |                |                        |                         |                    |
|----------------|------------------------|-------------------------|--------------------|
| Gas meter      | Stump (Remove)         | Water Meter             | Reduced Dig        |
| Fire Hydrant   | Tree (Remove); TREE, 2 | Fence                   | Typical Excavation |
| Plant (Remove) | Tree (Retain)          | Detail Area             |                    |
| Spigot         |                        | Permanent Site Features |                    |

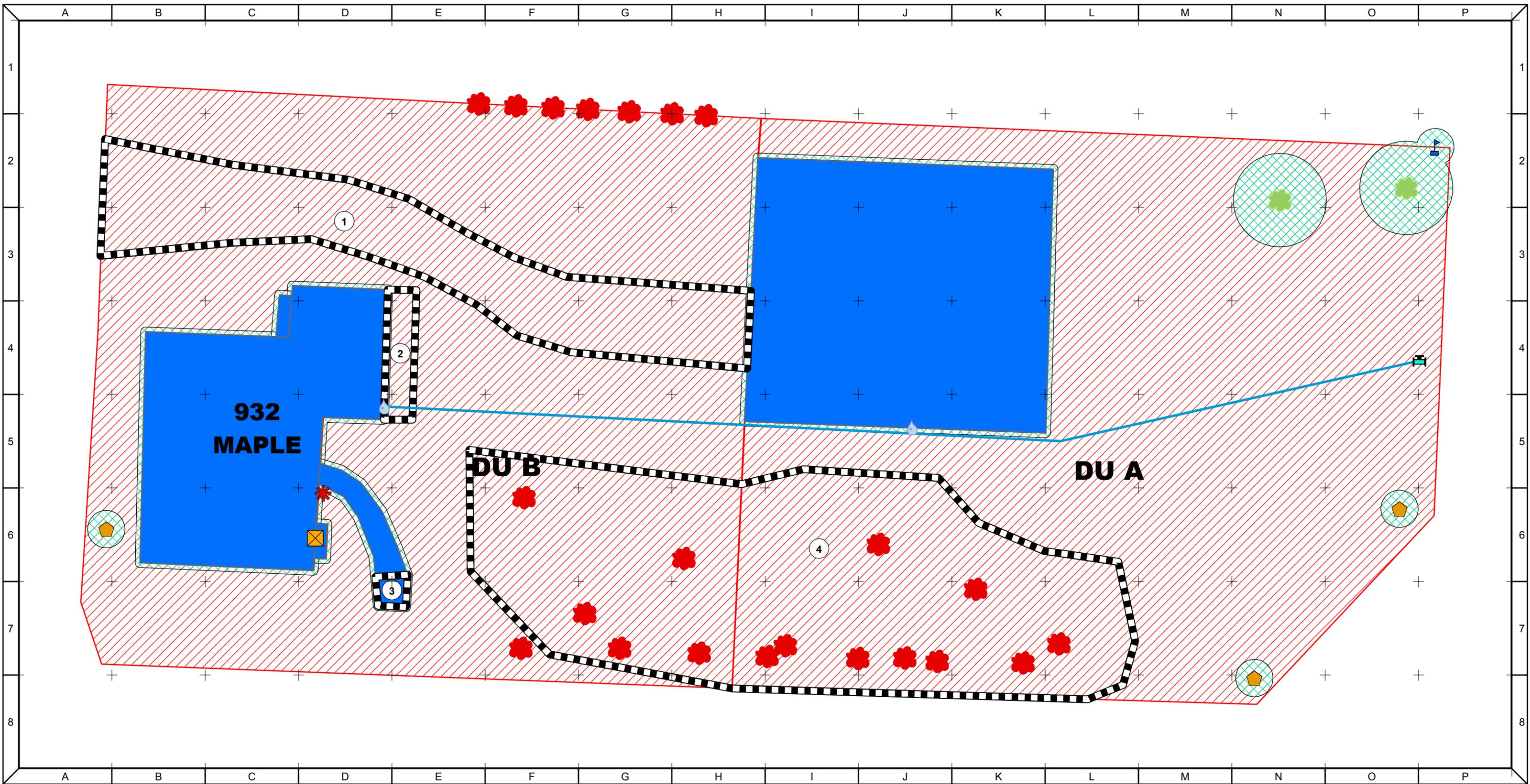




**929 PINE**  
**Brian & Maryanne Coffman**  
**Restoration Plan**  
**Figure 6b**

Legend			
	Gas meter		Spigot
	Fire Hydrant		Retained Tree
	Mailbox		Replaced Tree
	Replaced Plant		Water Meter
	Fence		Pavers
	Detail Area		Sod
	Crushed Rock		River Rock
	Permanent Site Feature		





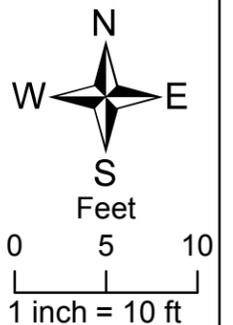
**932 MAPLE**  
**Robert Franks**  
**Excavation Plan**  
**Figure 7a**

**Legend**

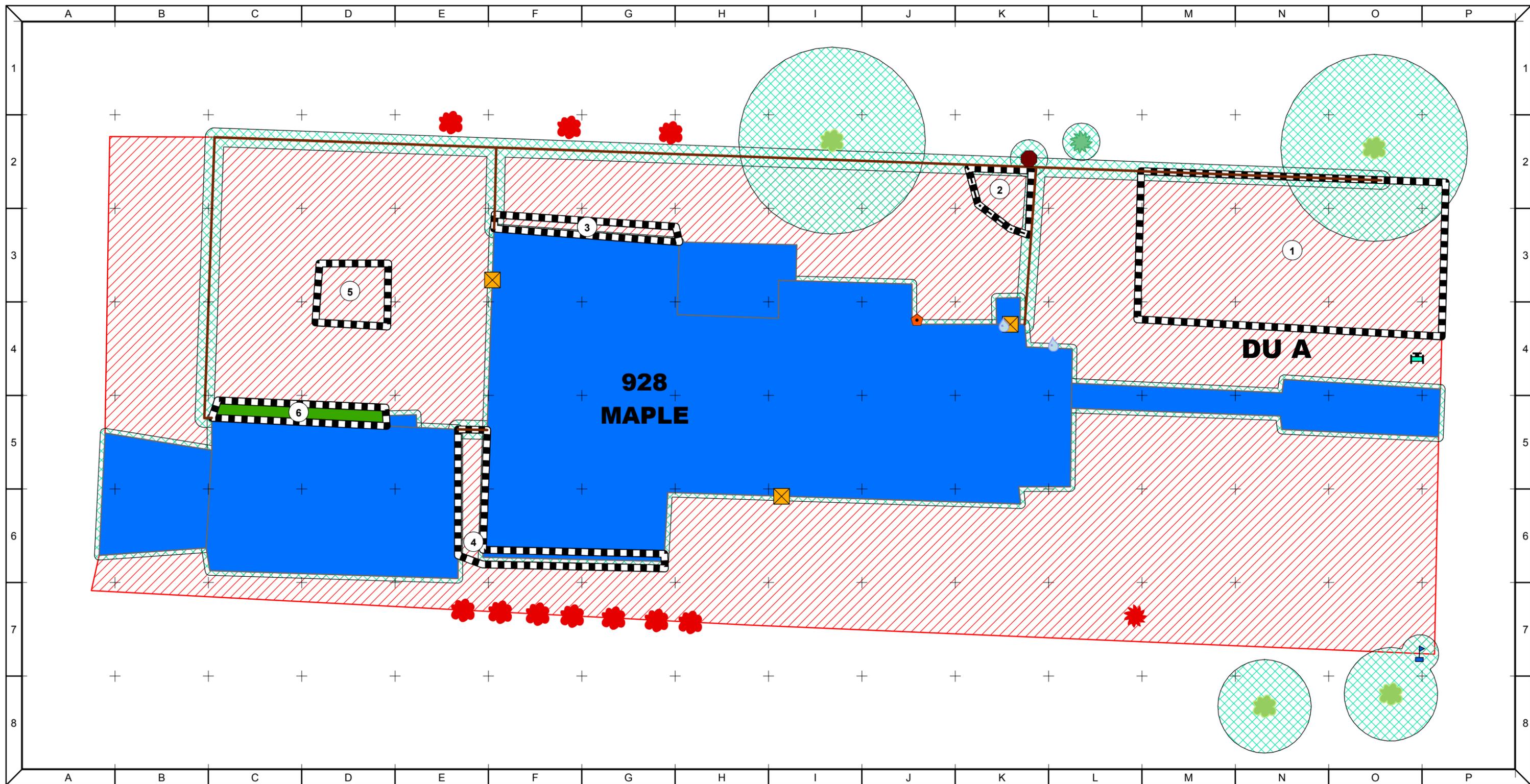
- |                   |                        |             |                         |
|-------------------|------------------------|-------------|-------------------------|
| Crawlspace Access | Spigot                 | Water Meter | Reduced Dig             |
| Mailbox           | Tree (Remove); TREE, 2 | Water Line  | Typical Excavation      |
| Plant (Remove)    | Tree (Retain)          | Detail Area | Permanent Site Features |
| Street Sign       |                        |             |                         |



4/19/2017





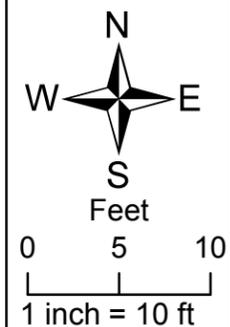


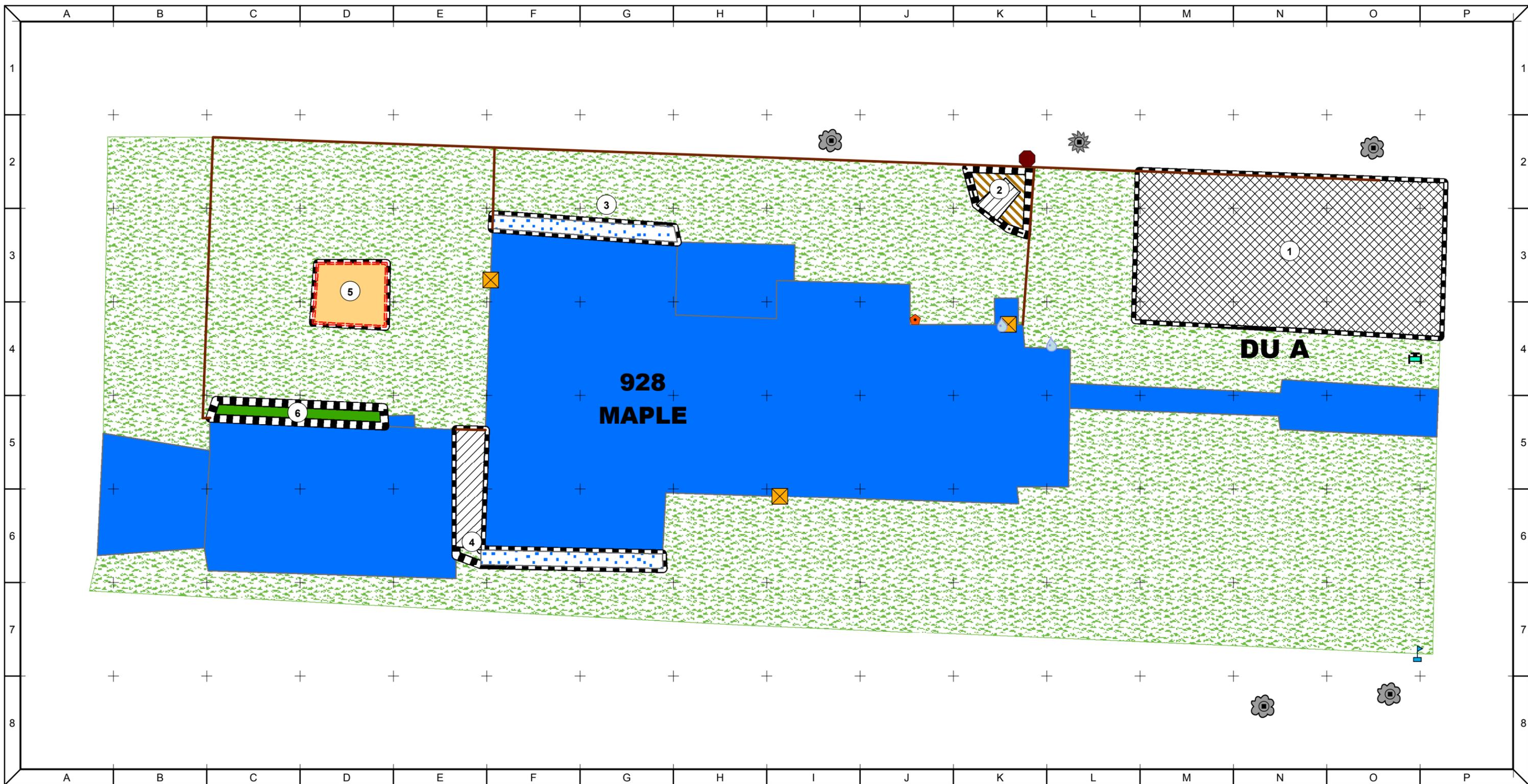
**928 MAPLE**  
**Aaron Wyeth**

**Excavation Plan**  
**Figure 8a**

**Legend**

- |                   |              |                        |                |                     |                           |                         |
|-------------------|--------------|------------------------|----------------|---------------------|---------------------------|-------------------------|
| Unknown Pipe      | Utility Pole | Stump (Retain)         | Tree (Retain)  | Concrete Block Wall | Landscape Areas to Remain | Reduced Dig             |
| Crawlspace Access | Spigot       | Tree (Remove); TREE, 2 | Stump (Remove) | Fence               | Detail Area               | Typical Excavation      |
| Mailbox           |              |                        |                |                     |                           |                         |
|                   |              |                        |                |                     |                           | Permanent Site Features |





# 928 MAPLE Aaron Wyeth

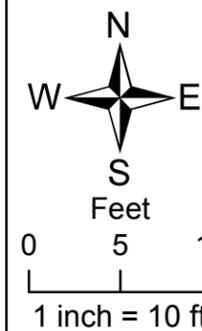
## Restoration Plan Figure 8b

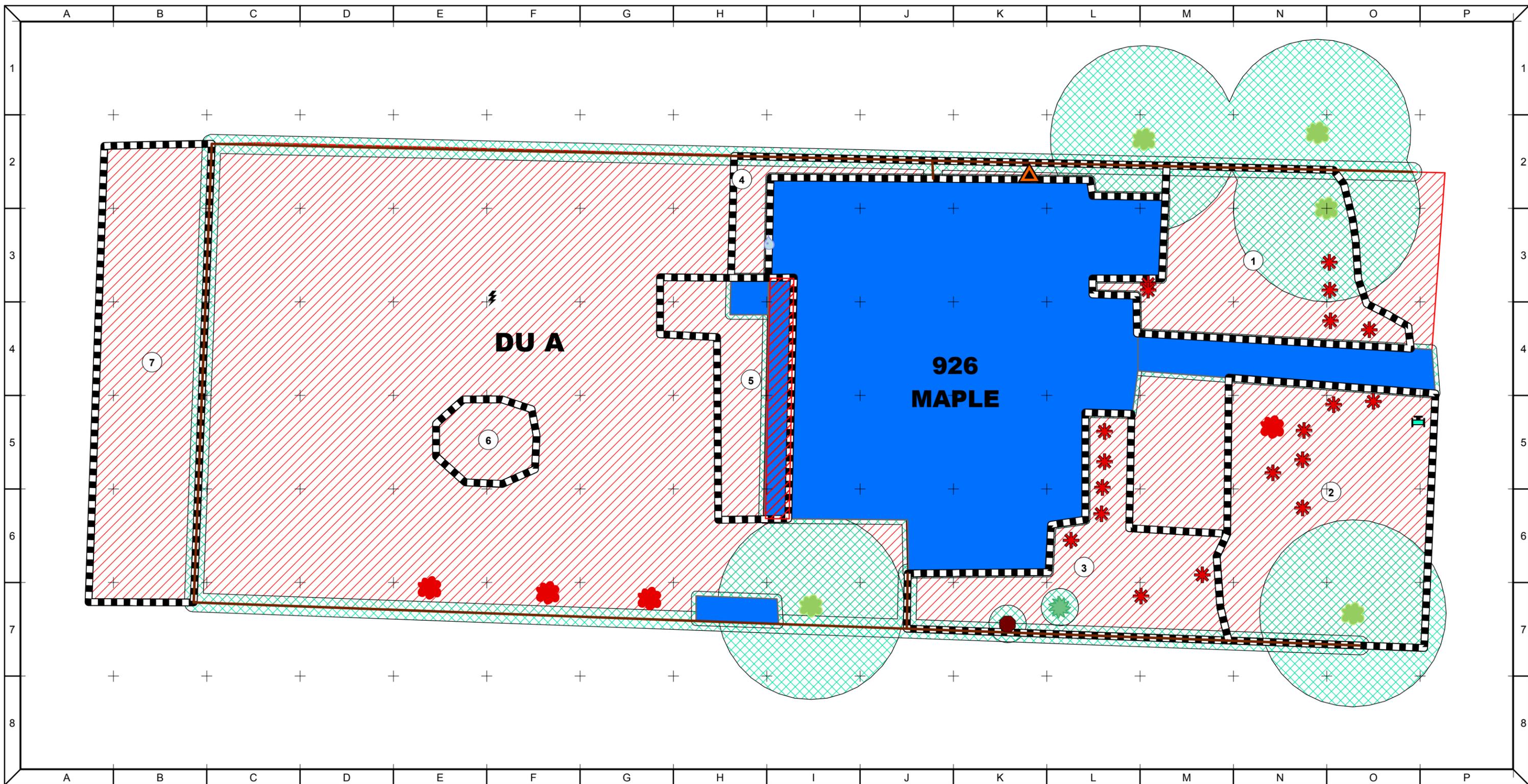
### Legend

- |                   |                |                 |              |                            |
|-------------------|----------------|-----------------|--------------|----------------------------|
| Unknown Pipe      | Spigot         | Fence           | Crushed Rock | Sod                        |
| Crawlspace Access | Retained Stump | Concrete Blocks | River Rock   | Undisturbed Landscape Area |
| Mailbox           | Retained Tree  | Detail Area     | Pavers       | Permanent Site Feature     |
| Utility Pole      | Water Meter    | Landscape Bed   | Fire Pit     |                            |



4/19/2017

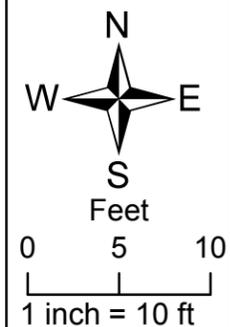


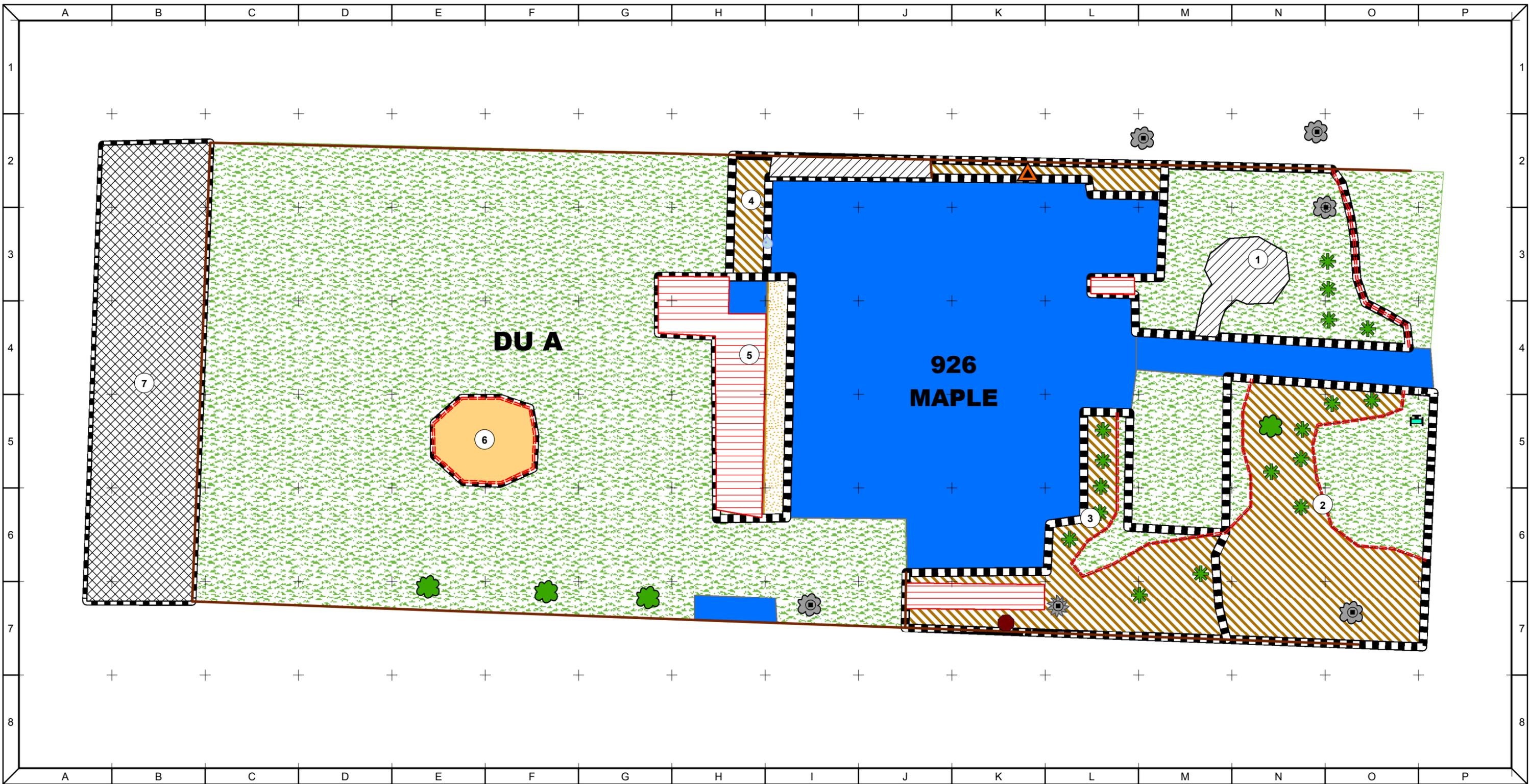


**926 MAPLE**  
**Heather Young**  
**Excavation Plan**  
**Figure 9a**

**Legend**

- |                |                        |               |                         |
|----------------|------------------------|---------------|-------------------------|
| Gas meter      | Spigot                 | Tree (Retain) | Permanent Site Features |
| Conduit        | Stump (Retain)         | Water Meter   | Reduced Dig             |
| Plant (Remove) | Tree (Remove); TREE, 2 | Fence         | Typical Excavation      |
| Utility Pole   |                        | Detail Area   |                         |





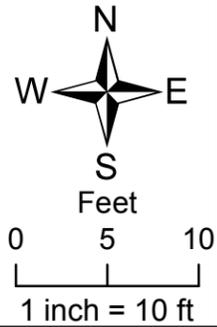
**926 MAPLE**  
**Heather Young**  
**Restoration Plan**  
**Figure 9b**

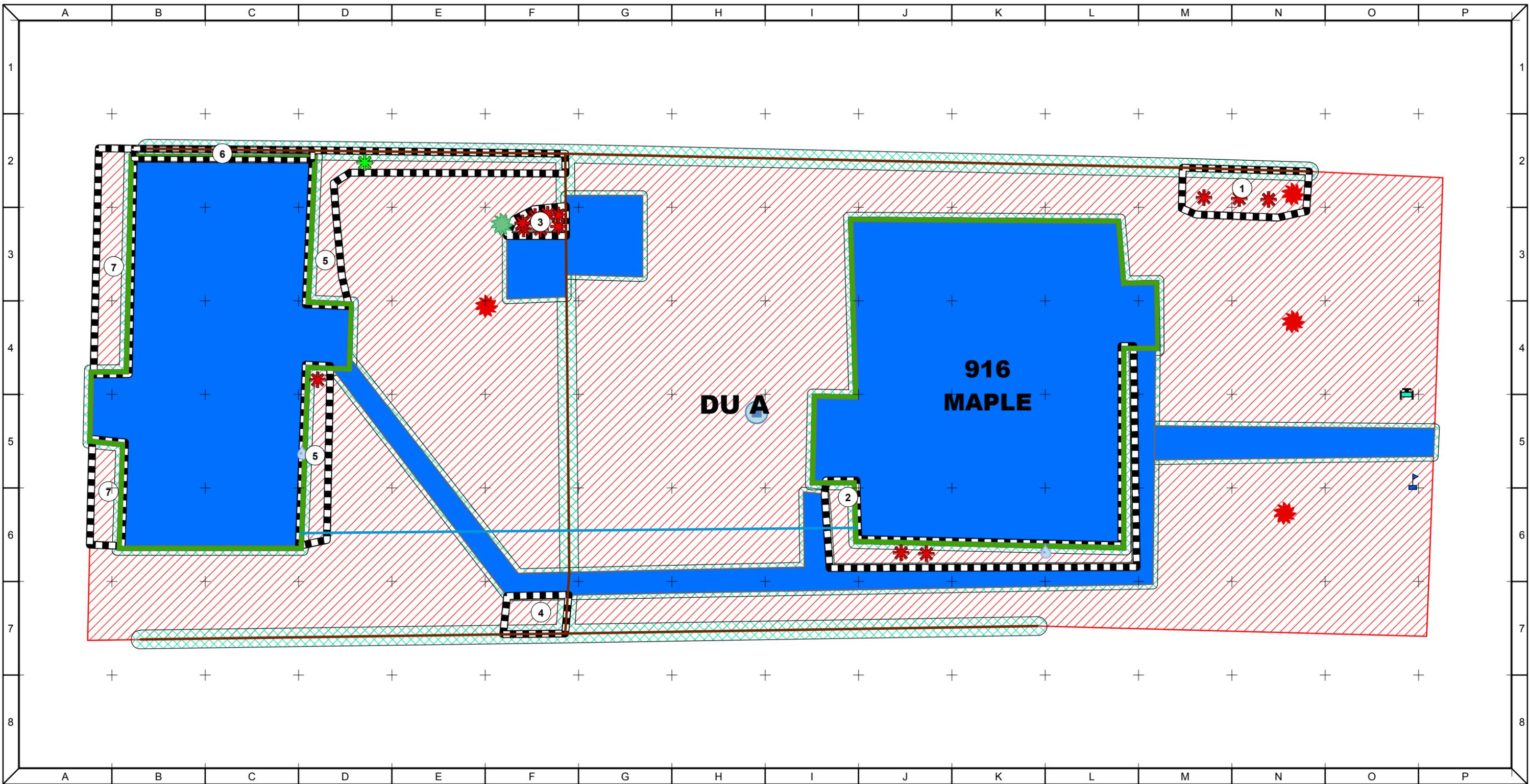
**Legend**

- |                |                |              |               |                        |
|----------------|----------------|--------------|---------------|------------------------|
| Gas meter      | Retained Stump | Water Meter  | Landscape Bed | Fire Pit               |
| Replaced Plant | Retained Tree  | Brick Border | Crushed Rock  | Common Fill Full Depth |
| Utility Pole   | Replaced Tree  | Fence        | Pavers        | Sod                    |
| Spigot         |                | Detail Area  | Brick Pavers  | Permanent Site Feature |



4/19/2017

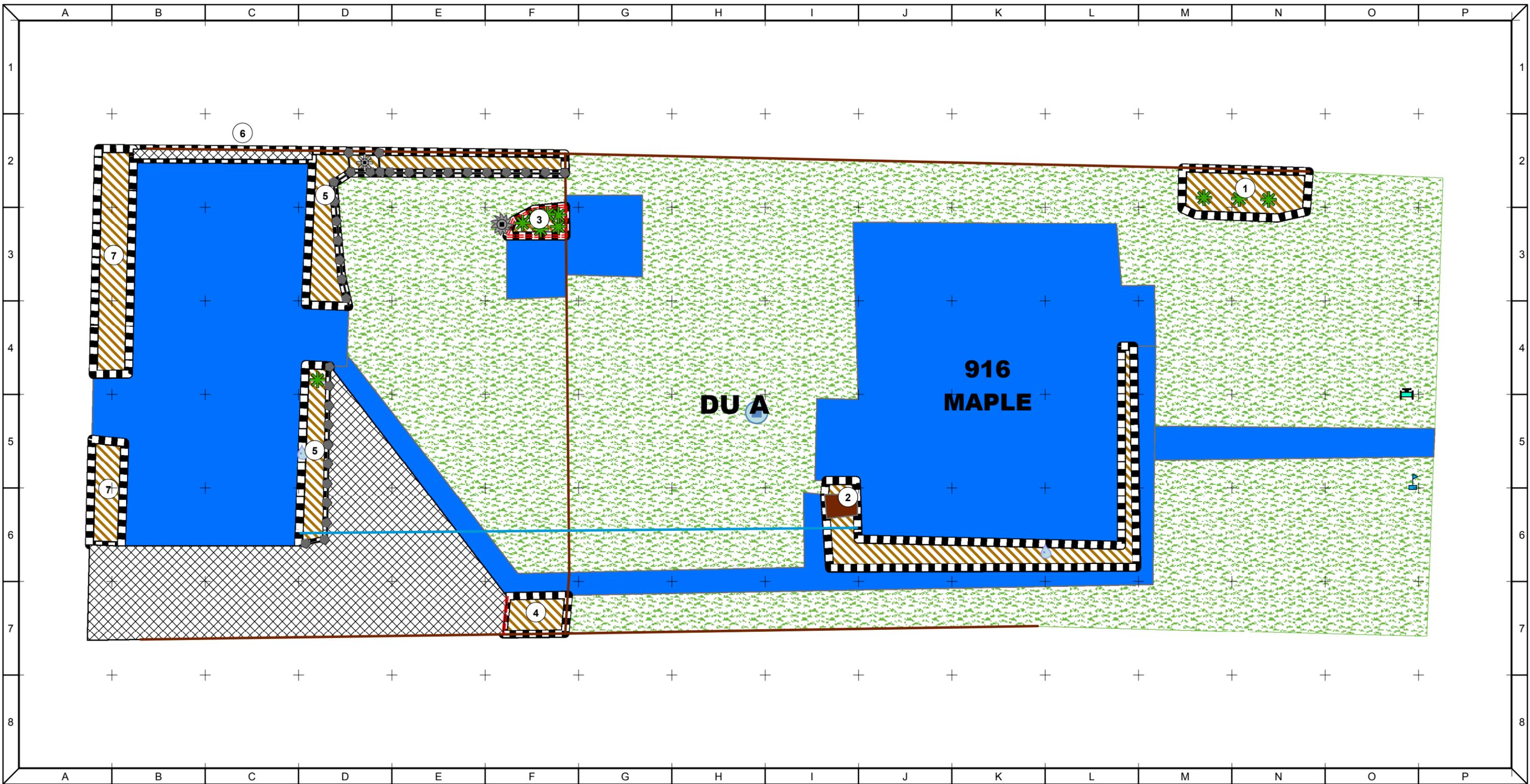




**916 MAPLE**  
**Ken & Devin Greenway**  
**Excavation Plan**  
**Figure 10a**

- Legend**
- Mailbox
  - Plant (Remove)
  - Plant (Retain)
  - Sewer Cleanout
  - Spigot
  - Stump (Remove)
  - Stump (Retain)
  - Water Meter
  - Water Line
  - Fence
  - Detail Area
  - Landscape Areas to Remain
  - Permanent Site Features
  - Reduced Dig
  - Typical Excavation

W    N    E  
 S  
 Feet  
 0    5    10  
 1 inch = 10 ft



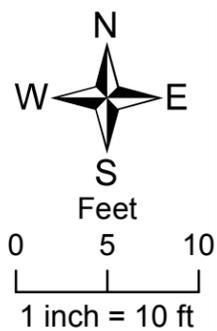
**916 MAPLE**  
**Ken & Devin Greenway**  
**Restoration Plan**  
**Figure 10b**

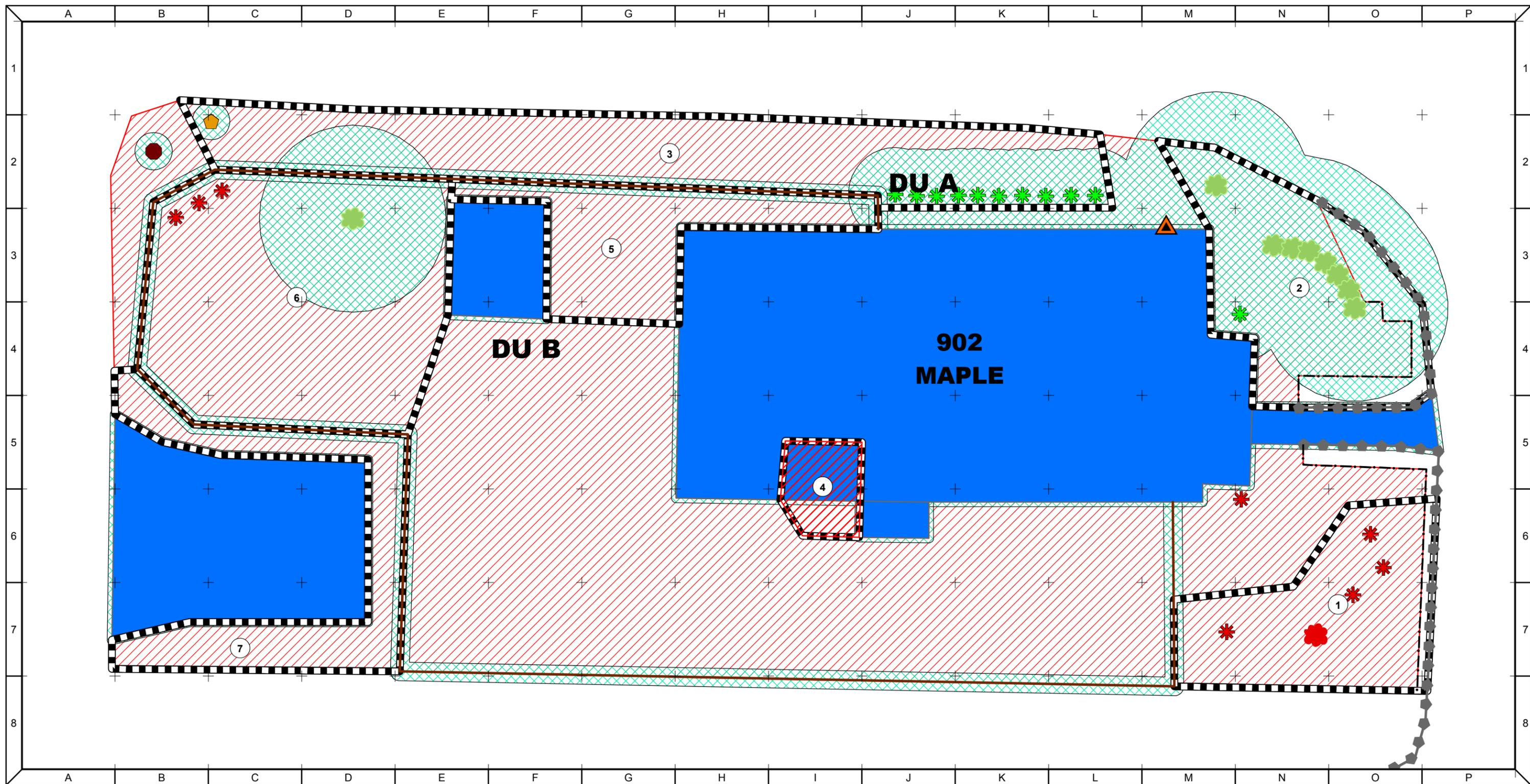
**Legend**

- |                |                |              |               |                        |
|----------------|----------------|--------------|---------------|------------------------|
| Mailbox        | Sewer Cleanout | Brick Border | Wood Steps    | Permanent Site Feature |
| Replaced Plant | Spigot         | Water Line   | Landscape Bed |                        |
| Retained Plant | Retained Stump | Fence        | Crushed Rock  |                        |
|                | Water Meter    | Rock Border  | Detail Area   |                        |
|                |                |              | Sod           |                        |



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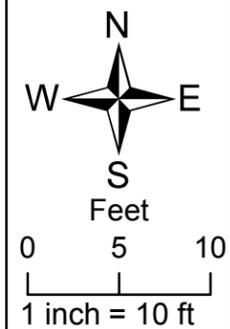


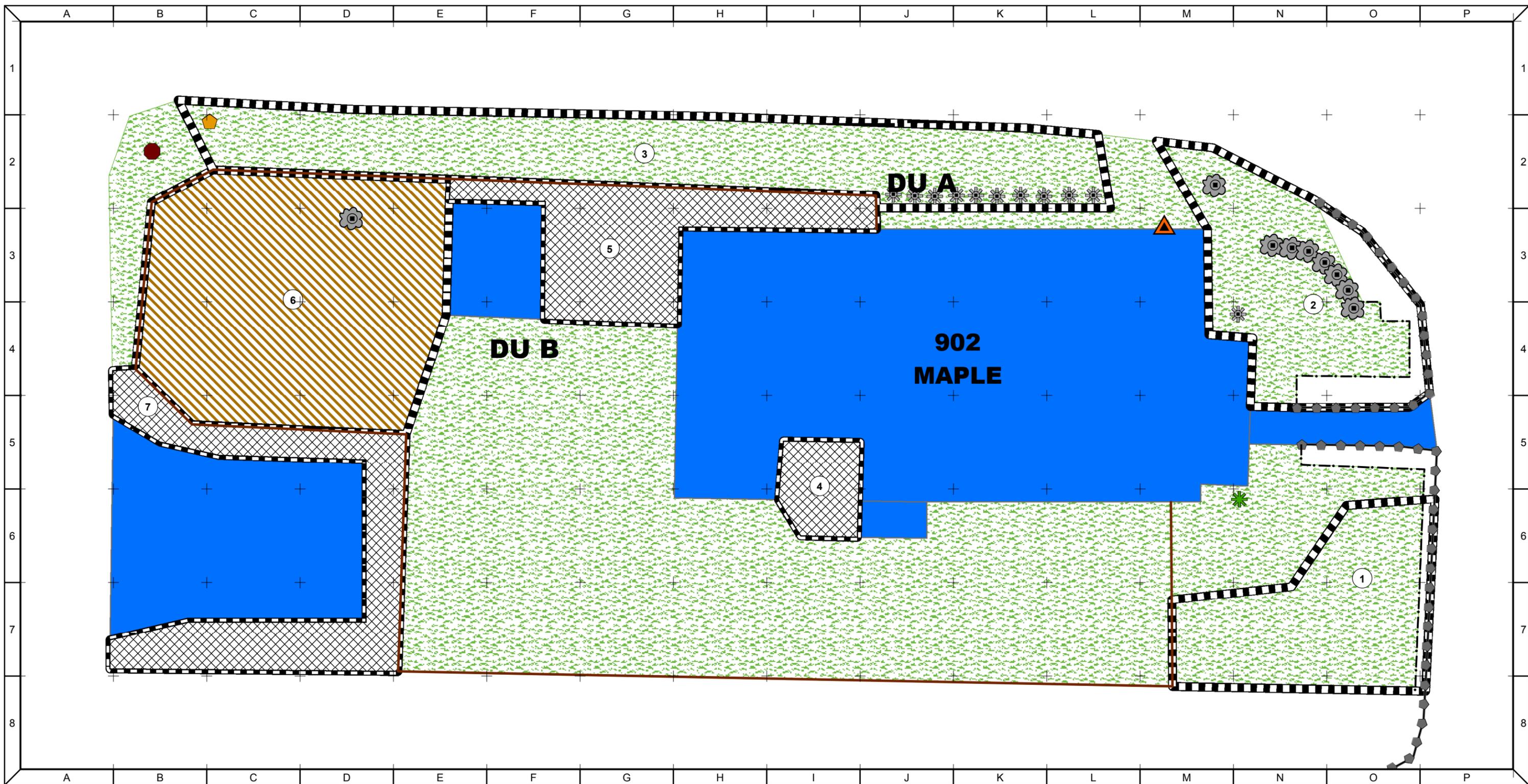
**902 MAPLE  
Khiet Huynh**

**Excavation Plan  
Figure 11a**

**Legend**

- |                |                        |                     |                         |
|----------------|------------------------|---------------------|-------------------------|
| Gas meter      | Street Sign            | Fence               | Permanent Site Features |
| Plant (Remove) | Tree (Remove); TREE, 2 | Concrete Block Wall | Reduced Dig             |
| Plant (Retain) | Tree (Retain)          | Rock Border         | Typical Excavation      |
| Utility Pole   | Detail Area            |                     |                         |

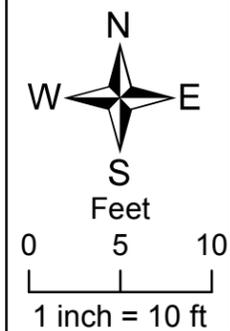


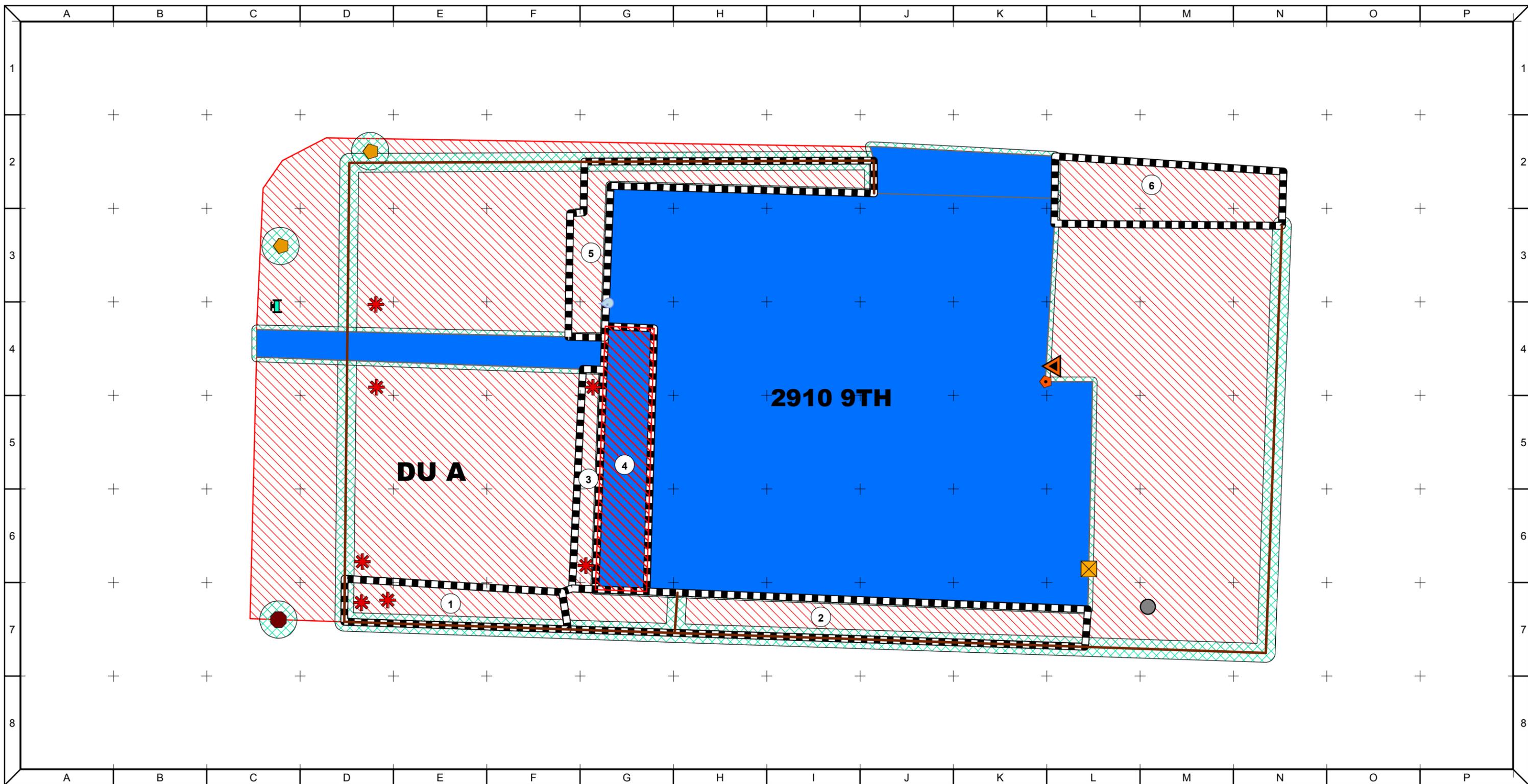


**902 MAPLE**  
**Khiet Huynh**  
**Restoration Plan**  
**Figure 11b**

**Legend**

- |                |                 |               |                        |
|----------------|-----------------|---------------|------------------------|
| Gas meter      | Street Sign     | Rock Border   | Sod                    |
| Replaced Plant | Retained Tree   | Detail Area   | Permanent Site Feature |
| Retained Plant | Fence           | Landscape Bed |                        |
| Utility Pole   | Concrete Blocks | Crushed Rock  |                        |





**2910 9TH  
Son Yon Ivy**

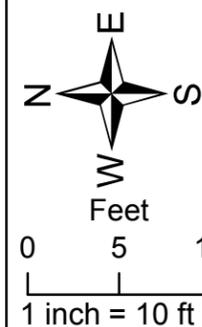
**Excavation Plan  
Figure 12a**

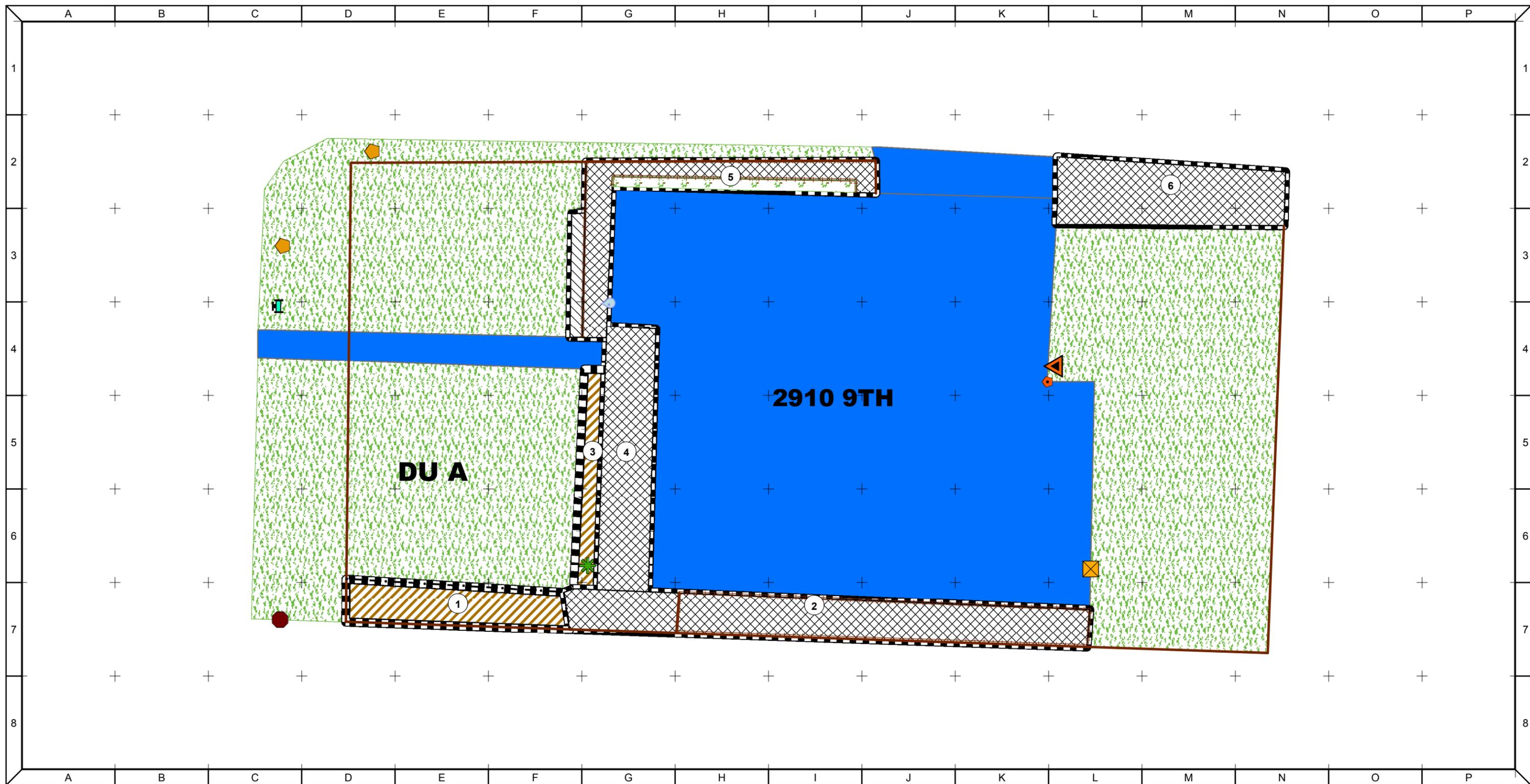
**Legend**

- |                   |                     |             |                         |
|-------------------|---------------------|-------------|-------------------------|
| Gas meter         | Plant (Remove)      | Spigot      | Permanent Site Features |
| Unknown Pipe      | Utility Pole        | Water Meter | Reduced Dig             |
| Crawlspace Access | Metal Post (Remove) | Fence       | Typical Excavation      |
|                   | Street Sign         | Detail Area |                         |



4/19/2017





# 2910 9TH Son Yon Ivy

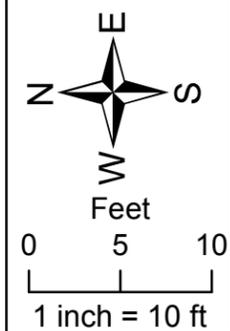
## Restoration Plan Figure 12b

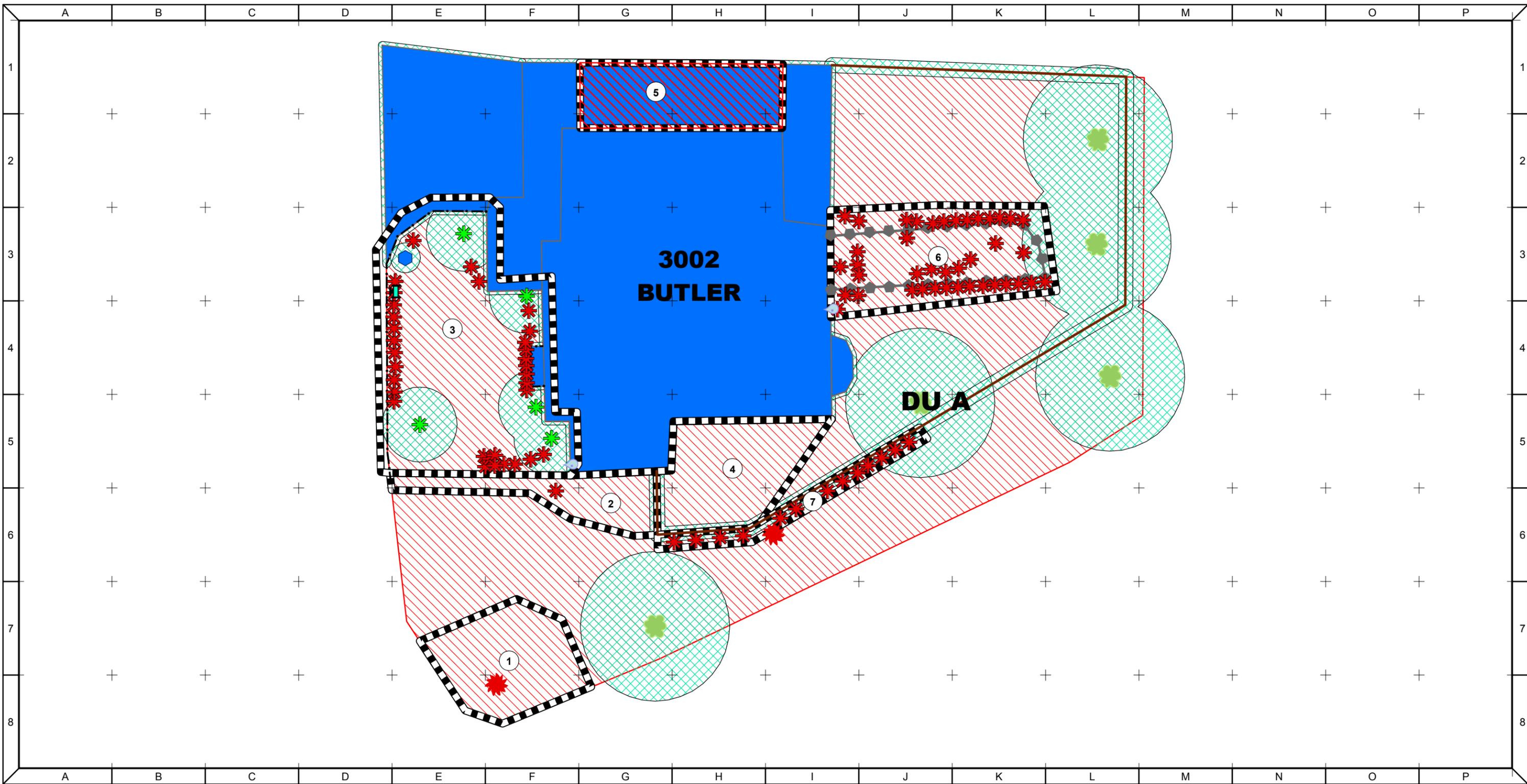
### Legend

- |                   |                |                 |                         |              |
|-------------------|----------------|-----------------|-------------------------|--------------|
| Unknown Pipe      | Replaced Plant | Water Meter     | Detail Area             | Crushed Rock |
| Gas meter         | Utility Pole   | Wood Border     | Landscape Bed           | Pavers       |
| Crawlspace Access | Street Sign    | Fence           | Landscape Bed (No Bark) | Sod          |
|                   | Spigot         | Concrete Blocks | Permanent Site Feature  |              |



4/19/2017

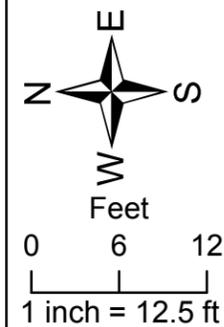


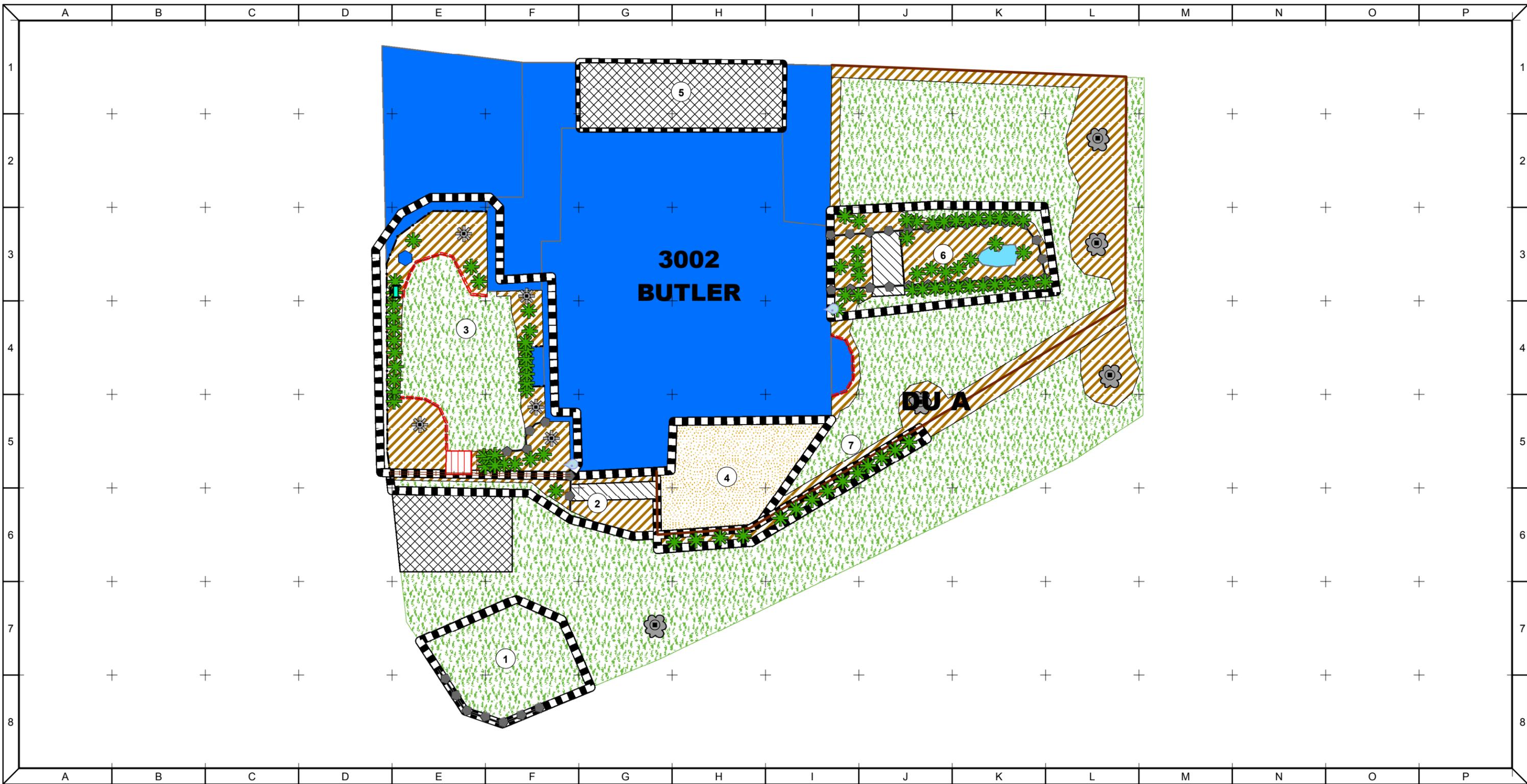


**3002 BUTLER**  
**Brian & Robin McCormick**  
**Excavation Plan**  
**Figure 13a**

**Legend**

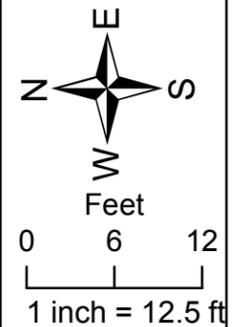
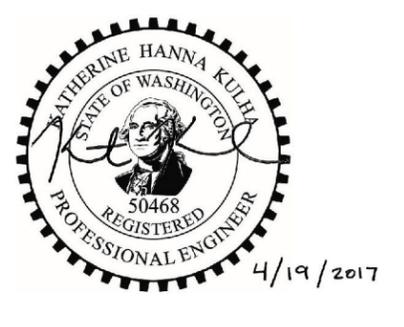
- |                |                |                         |                    |
|----------------|----------------|-------------------------|--------------------|
| Plant (Remove) | Stump (Remove) | Concrete Block Wall     | Reduced Dig        |
| Plant (Retain) | Tree (Retain)  | Rock Border             | Typical Excavation |
| Flag Pole      | Water Meter    | Detail Area             |                    |
| Spigot         | Fence          | Permanent Site Features |                    |





**3002 BUTLER**  
**Brian & Robin McCormick**  
**Restoration Plan**  
**Figure 13b**

Legend			
Replaced Plant	Retained Tree	Concrete Blocks	Crushed Rock
Retained Plant	Water Meter	Rock Border	Pavers
Flag Pole	Wood Border	Detail Area	Brick Pavers
Spigot	Brick Border	Landscape Bed	Common Fill Full Depth
	Fence		Water Feature
			Sod
			Permanent Site Feature



# Appendix C

Pre-Construction Soil Sampling Results

**Property Tax ID:** 00438718800101  
**Property Address:** 901 PINE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	350-A-01-A	0 - 6	30.5	40	18.1	20		
A	350-A-02-A	0 - 6	13	40	18.1	20		
A	350-A-03-A	0 - 6	6.9	40	18.1	20		
A	350-A-04-A	0 - 6	12.8	40	18.1	20		
A	350-A-05-A	0 - 6	13.2	40	18.1	20		
A	350-A-06-A	0 - 6	35.7	40	18.1	20		
A	350-A-07-A	0 - 6	18	40	18.1	20		
A	350-A-08-A	0 - 6	14.5	40	18.1	20		
A	350-A-01-B	6 - 12	15.2	40	18.0	20		
A	350-A-02-B	6 - 12	13.9	40	18.0	20		
A	350-A-03-B	6 - 12	7.6	40	18.0	20		
A	350-A-04-B	6 - 12	16.7	40	18.0	20		
A	350-A-05-B	6 - 12	11.7	40	18.0	20		
A	350-A-06-B	6 - 12	50	40	18.0	20	Yes	
A	350-A-07-B	6 - 12	14.1	40	18.0	20		
A	350-A-08-B	6 - 12	14.8	40	18.0	20		
A	350-A-01-C	12 - 18	17.1	150	21.8	60		
A	350-A-02-C	12 - 18	17.8	150	21.8	60		
A	350-A-03-C	12 - 18	14.5	150	21.8	60		
A	350-A-04-C	12 - 18	34.9	150	21.8	60		
A	350-A-05-C	12 - 18	12.9	150	21.8	60		
A	350-A-06-C	12 - 18	34.3	150	21.8	60		
A	350-A-07-C	12 - 18	21.2	150	21.8	60		
A	350-A-01-D	18 - 24	9.3	150	20.0	60		
A	350-A-02-D	18 - 24	14.9	150	20.0	60		
A	350-A-03-D	18 - 24	14.5	150	20.0	60		
A	350-A-04-D	18 - 24	14.2	150	20.0	60		
A	350-A-05-D	18 - 24	10.9	150	20.0	60		
A	350-A-06-D	18 - 24	51.3	150	20.0	60		
A	350-A-07-D	18 - 24	24.9	150	20.0	60		
B	350-B-01-A	0 - 6	12.2	40	15.2	20		
B	350-B-02-A	0 - 6	11	40	15.2	20		
B	350-B-03-A	0 - 6	17.7	40	15.2	20		
B	350-B-04-A	0 - 6	22.3	40	15.2	20		
B	350-B-05-A	0 - 6	12.7	40	15.2	20		
B	350-B-01-B	6 - 12	8.2	40	22.7	20		Yes
B	350-B-02-B	6 - 12	18	40	22.7	20		Yes
B	350-B-03-B	6 - 12	25.7	40	22.7	20		Yes
B	350-B-04-B	6 - 12	40	40	22.7	20		Yes
B	350-B-05-B	6 - 12	21.5	40	22.7	20		Yes
B	350-B-01-C	12 - 18	6.5	150	22.2	60		
B	350-B-02-C	12 - 18	22.8	150	22.2	60		
B	350-B-03-C	12 - 18	22.5	150	22.2	60		
B	350-B-04-C	12 - 18	42.1	150	22.2	60		
B	350-B-05-C	12 - 18	17.1	150	22.2	60		

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
B	350-B-01-D	18 - 24	3.8	150	14.9	60		
B	350-B-02-D	18 - 24	14.7	150	14.9	60		
B	350-B-03-D	18 - 24	21.3	150	14.9	60		
B	350-B-04-D	18 - 24	17.1	150	14.9	60		
B	350-B-05-D	18 - 24	17.8	150	14.9	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

*Notes*

There are no data qualifiers in this dataset.

Results in **bold** were analyzed by ICP-MS per EPA 6020.

All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718800100  
2910 9TH ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	351-A-01-A	0 - 6	11.1	40	13.9	20		
A	351-A-02-A	0 - 6	8.6	40	13.9	20		
A	351-A-03-A	0 - 6	14.9	40	13.9	20		
A	351-A-04-A	0 - 6	19.3	40	13.9	20		
A	351-A-05-A	0 - 6	15.7	40	13.9	20		
A	351-A-01-B	6 - 12	6.7	40	14.8	20		
A	351-A-02-B	6 - 12	5	40	14.8	20		
A	351-A-03-B	6 - 12	13	40	14.8	20		
A	351-A-04-B	6 - 12	8.4	40	14.8	20		
A	351-A-05-B	6 - 12	41	40	14.8	20	Yes	
A	351-A-01-C	12 - 18	5.7	150	8.1	60		
A	351-A-02-C	12 - 18	7.9	150	8.1	60		
A	351-A-03-C	12 - 18	6.7	150	8.1	60		
A	351-A-04-C	12 - 18	11	150	8.1	60		
A	351-A-05-C	12 - 18	9.4	150	8.1	60		
A	351-A-01-D	18 - 24	4.3	150	6.0	60		
A	351-A-02-D	18 - 24	6.4	150	6.0	60		
A	351-A-03-D	18 - 24	7.4	150	6.0	60		
A	351-A-04-D	18 - 24	5.8	150	6.0	60		
A	351-A-05-D	18 - 24	6.2	150	6.0	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

*Notes*

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718800500  
907 PINE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	352-A-01-B	6 - 12	22.2	40	40.1	20		Yes
A	352-A-02-B	6 - 12	67	40	40.1	20	Yes	Yes
A	352-A-03-B	6 - 12	62.5	40	40.1	20	Yes	Yes
A	352-A-04-B	6 - 12	24.9	40	40.1	20		Yes
A	352-A-05-B	6 - 12	23.7	40	40.1	20		Yes
A	352-A-01-C	12 - 18	17.4	150	37.6	60		
A	352-A-02-C	12 - 18	67.6	150	37.6	60		
A	352-A-03-C	12 - 18	69.4	150	37.6	60		
A	352-A-04-C	12 - 18	19.5	150	37.6	60		
A	352-A-05-C	12 - 18	14.2	150	37.6	60		
A	352-A-01-D	18 - 24	9.3	150	38.0	60		
A	352-A-02-D	18 - 24	99.4	150	38.0	60		
A	352-A-03-D	18 - 24	36.8	150	38.0	60		
A	352-A-04-D	18 - 24	35.5	150	38.0	60		
A	352-A-05-D	18 - 24	8.8	150	38.0	60		
B	352-B-01-B	6 - 12	50	40	28.9	20	Yes	Yes
B	352-B-02-B	6 - 12	32	40	28.9	20		Yes
B	352-B-03-B	6 - 12	9.7	40	28.9	20		Yes
B	352-B-04-B	6 - 12	13.6	40	28.9	20		Yes
B	352-B-05-B	6 - 12	39	40	28.9	20		Yes
B	352-B-01-C	12 - 18	44.7	150	25.0	60		
B	352-B-02-C	12 - 18	30.1	150	25.0	60		
B	352-B-03-C	12 - 18	18	150	25.0	60		
B	352-B-04-C	12 - 18	7.3	150	25.0	60		
B	352-B-05-C	12 - 18	24.8	150	25.0	60		
B	352-B-01-D	18 - 24	14.4	150	14.3	60		
B	352-B-02-D	18 - 24	8	150	14.3	60		
B	352-B-03-D	18 - 24	14.7	150	14.3	60		
B	352-B-04-D	18 - 24	9.4	150	14.3	60		
B	352-B-05-D	18 - 24	25	150	14.3	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

*Notes*

There are no data qualifiers in this dataset.

Results in **bold** were analyzed by ICP-MS per EPA 6020.

All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718800700  
909 PINE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	353_A_1	0 - 6	93	40	39.6	20	Yes	Yes
A	353_A_2	0 - 6	25.7	40	39.6	20		Yes
A	353_A_3	0 - 6	20.2	40	39.6	20		Yes
A	353_A_4	0 - 6	27.7	40	39.6	20		Yes
A	353_A_5	0 - 6	37.9	40	39.6	20		Yes
A	353_A_6	0 - 6	33.1	40	39.6	20		Yes
A	353_A_1	6 - 12	64.7	40	36.7	20	Yes	Yes
A	353_A_2	6 - 12	23.1	40	36.7	20		Yes
A	353_A_3	6 - 12	21.5	40	36.7	20		Yes
A	353_A_4	6 - 12	29.5	40	36.7	20		Yes
A	353_A_5	6 - 12	32.8	40	36.7	20		Yes
A	353_A_6	6 - 12	48.8	40	36.7	20	Yes	Yes
A	353_A_1	12 - 18	<b>86.8</b>	150	44.5	60		
A	353_A_2	12 - 18	27.6	150	44.5	60		
A	353_A_3	12 - 18	26.6	150	44.5	60		
A	353_A_4	12 - 18	23.2	150	44.5	60		
A	353_A_5	12 - 18	44	150	44.5	60		
A	353_A_6	12 - 18	58.8	150	44.5	60		
A	353_A_1	18 - 24	31.7	150	33.0	60		
A	353_A_2	18 - 24	21.4	150	33.0	60		
A	353_A_3	18 - 24	20.9	150	33.0	60		
A	353_A_4	18 - 24	<LOD	150	33.0	60		
A	353_A_5	18 - 24	51	150	33.0	60		
A	353_A_6	18 - 24	65	150	33.0	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

**Notes**

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718801301  
929 PINE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	356-A-01-B	6 - 12	45.7	40	38.6	20	Yes	Yes
A	356-A-02-B	6 - 12	9.4	40	38.6	20		Yes
A	356-A-03-B	6 - 12	31	40	38.6	20		Yes
A	356-A-04-B	6 - 12	37	40	38.6	20		Yes
A	356-A-05-B	6 - 12	57	40	38.6	20	Yes	Yes
A	356-A-06-B	6 - 12	54	40	38.6	20	Yes	Yes
A	356-A-07-B	6 - 12	50.5	40	38.6	20	Yes	Yes
A	356-A-08-B	6 - 12	14.3	40	38.6	20		Yes
A	356-A-09-B	6 - 12	48.1	40	38.6	20	Yes	Yes
A	356-A-01-C	12 - 18	37.6	150	34.8	60		
A	356-A-02-C	12 - 18	10.1	150	34.8	60		
A	356-A-03-C	12 - 18	61.9	150	34.8	60		
A	356-A-04-C	12 - 18	73.1	150	34.8	60		
A	356-A-05-C	12 - 18	20.4	150	34.8	60		
A	356-A-06-C	12 - 18	22.8	150	34.8	60		
A	356-A-07-C	12 - 18	33.9	150	34.8	60		
A	356-A-08-C	12 - 18	11.9	150	34.8	60		
A	356-A-09-C	12 - 18	41.9	150	34.8	60		
A	356-A-01-D	18 - 24	21.8	150	26.7	60		
A	356-A-02-D	18 - 24	9.1	150	26.7	60		
A	356-A-03-D	18 - 24	70.4	150	26.7	60		
A	356-A-04-D	18 - 24	11.6	150	26.7	60		
A	356-A-05-D	18 - 24	6.2	150	26.7	60		
A	356-A-06-D	18 - 24	26.1	150	26.7	60		
A	356-A-07-D	18 - 24	19.5	150	26.7	60		
A	356-A-08-D	18 - 24	34.1	150	26.7	60		
A	356-A-09-D	18 - 24	41.4	150	26.7	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

**Notes**

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718803300  
902 MAPLE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	358-A-01-B	6 - 12	6.4	40	33.5	20		Yes
A	358-A-02-B	6 - 12	27	40	33.5	20		Yes
A	358-A-03-B	6 - 12	49.7	40	33.5	20	Yes	Yes
A	358-A-04-B	6 - 12	46	40	33.5	20	Yes	Yes
A	358-A-05-B	6 - 12	38.2	40	33.5	20		Yes
A	358-A-01-C	12 - 18	7.7	150	25.4	60		
A	358-A-02-C	12 - 18	16.4	150	25.4	60		
A	358-A-03-C	12 - 18	35.2	150	25.4	60		
A	358-A-04-C	12 - 18	24.9	150	25.4	60		
A	358-A-05-C	12 - 18	42.8	150	25.4	60		
A	358-A-01-D	18 - 24	7.3	150	25.6	60		
A	358-A-02-D	18 - 24	5.7	150	25.6	60		
A	358-A-03-D	18 - 24	45.2	150	25.6	60		
A	358-A-04-D	18 - 24	47	150	25.6	60		
A	358-A-05-D	18 - 24	22.6	150	25.6	60		
B	358-B-01-B	6 - 12	15.6	40	37.4	20		Yes
B	358-B-02-B	6 - 12	43	40	37.4	20	Yes	Yes
B	358-B-03-B	6 - 12	57.7	40	37.4	20	Yes	Yes
B	358-B-04-B	6 - 12	19.7	40	37.4	20		Yes
B	358-B-05-B	6 - 12	51	40	37.4	20	Yes	Yes
B	358-B-01-C	12 - 18	32.9	150	27.9	60		
B	358-B-02-C	12 - 18	46	150	27.9	60		
B	358-B-03-C	12 - 18	24.3	150	27.9	60		
B	358-B-04-C	12 - 18	15.7	150	27.9	60		
B	358-B-05-C	12 - 18	20.6	150	27.9	60		
B	358-B-01-D	18 - 24	6.3	150	17.6	60		
B	358-B-02-D	18 - 24	25.3	150	17.6	60		
B	358-B-03-D	18 - 24	24.7	150	17.6	60		
B	358-B-04-D	18 - 24	4.9	150	17.6	60		
B	358-B-05-D	18 - 24	27	150	17.6	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

*Notes*

There are no data qualifiers in this dataset.

Results in **bold** were analyzed by ICP-MS per EPA 6020.

All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718802600  
916 MAPLE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	361-A-01-B	6 - 12	26.9	40	27.2	20		Yes
A	361-A-02-B	6 - 12	26.5	40	27.2	20		Yes
A	361-A-03-B	6 - 12	15.3	40	27.2	20		Yes
A	361-A-04-B	6 - 12	62	40	27.2	20	Yes	Yes
A	361-A-05-B	6 - 12	15.3	40	27.2	20		Yes
A	361-A-06-B	6 - 12	29.3	40	27.2	20		Yes
A	361-A-07-B	6 - 12	38	40	27.2	20		Yes
A	361-A-08-B	6 - 12	10.7	40	27.2	20		Yes
A	361-A-09-B	6 - 12	20.7	40	27.2	20		Yes
A	361-A-01-C	12 - 18	21.8	150	18.6	60		
A	361-A-02-C	12 - 18	27.4	150	18.6	60		
A	361-A-03-C	12 - 18	9.8	150	18.6	60		
A	361-A-04-C	12 - 18	32.5	150	18.6	60		
A	361-A-05-C	12 - 18	8.4	150	18.6	60		
A	361-A-06-C	12 - 18	23.4	150	18.6	60		
A	361-A-07-C	12 - 18	22.2	150	18.6	60		
A	361-A-08-C	12 - 18	7.2	150	18.6	60		
A	361-A-09-C	12 - 18	14.6	150	18.6	60		
A	361-A-01-D	18 - 24	52	150	15.9	60		
A	361-A-02-D	18 - 24	8.7	150	15.9	60		
A	361-A-03-D	18 - 24	9.8	150	15.9	60		
A	361-A-04-D	18 - 24	13.6	150	15.9	60		
A	361-A-05-D	18 - 24	9.5	150	15.9	60		
A	361-A-06-D	18 - 24	23.9	150	15.9	60		
A	361-A-07-D	18 - 24	5.3	150	15.9	60		
A	361-A-08-D	18 - 24	13.1	150	15.9	60		
A	361-A-09-D	18 - 24	7.6	150	15.9	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

**Notes**

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718802200  
926 MAPLE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	363-A-01-B	6 - 12	3.8	40	21.2	20		Yes
A	363-A-02-B	6 - 12	21.3	40	21.2	20		Yes
A	363-A-03-B	6 - 12	23.2	40	21.2	20		Yes
A	363-A-04-B	6 - 12	30	40	21.2	20		Yes
A	363-A-05-B	6 - 12	17.1	40	21.2	20		Yes
A	363-A-06-B	6 - 12	26.6	40	21.2	20		Yes
A	363-A-07-B	6 - 12	5.9	40	21.2	20		Yes
A	363-A-08-B	6 - 12	42	40	21.2	20	Yes	Yes
A	363-A-01-C	12 - 18	3.4	150	20.2	60		
A	363-A-02-C	12 - 18	26.9	150	20.2	60		
A	363-A-03-C	12 - 18	31.9	150	20.2	60		
A	363-A-04-C	12 - 18	35.7	150	20.2	60		
A	363-A-05-C	12 - 18	5.6	150	20.2	60		
A	363-A-06-C	12 - 18	25.3	150	20.2	60		
A	363-A-07-C	12 - 18	10.4	150	20.2	60		
A	363-A-08-C	12 - 18	22.4	150	20.2	60		
A	363-A-01-D	18 - 24	2.9	150	12.7	60		
A	363-A-02-D	18 - 24	22.3	150	12.7	60		
A	363-A-03-D	18 - 24	12.8	150	12.7	60		
A	363-A-04-D	18 - 24	19.2	150	12.7	60		
A	363-A-05-D	18 - 24	7.9	150	12.7	60		
A	363-A-06-D	18 - 24	13.4	150	12.7	60		
A	363-A-07-D	18 - 24	10	150	12.7	60		
A	363-A-08-D	18 - 24	13	150	12.7	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

**Notes**

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718802000  
928 MAPLE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	364-A-01-B	6 - 12	20.9	40	22.3	20		Yes
A	364-A-02-B	6 - 12	16.2	40	22.3	20		Yes
A	364-A-03-B	6 - 12	14.1	40	22.3	20		Yes
A	364-A-04-B	6 - 12	29.1	40	22.3	20		Yes
A	364-A-05-B	6 - 12	43	40	22.3	20	Yes	Yes
A	364-A-06-B	6 - 12	9.9	40	22.3	20		Yes
A	364-A-07-B	6 - 12	23	40	22.3	20		Yes
A	364-A-01-C	12 - 18	12	150	15.6	60		
A	364-A-02-C	12 - 18	7.1	150	15.6	60		
A	364-A-03-C	12 - 18	22.1	150	15.6	60		
A	364-A-04-C	12 - 18	13.5	150	15.6	60		
A	364-A-05-C	12 - 18	4.4	150	15.6	60		
A	364-A-06-C	12 - 18	29.9	150	15.6	60		
A	364-A-07-C	12 - 18	19.9	150	15.6	60		
A	364-A-01-D	18 - 24	8.2	150	9.8	60		
A	364-A-02-D	18 - 24	8.2	150	9.8	60		
A	364-A-03-D	18 - 24	12.1	150	9.8	60		
A	364-A-04-D	18 - 24	9.7	150	9.8	60		
A	364-A-05-D	18 - 24	3.5	150	9.8	60		
A	364-A-06-D	18 - 24	20.7	150	9.8	60		
A	364-A-07-D	18 - 24	6.5	150	9.8	60		

**Key**

- <LOD = less than the limit of detection
- ICP-MS = inductively coupled plasma - mass spectrometry
- Refusal = sample could not be obtained
- ppm = parts per million
- XRF = x-ray fluorescence

*Notes*

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00438718801800  
932 MAPLE ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	365-A-01-B	6 - 12	110	40	44.1	20	Yes	Yes
A	365-A-02-B	6 - 12	64.3	40	44.1	20	Yes	Yes
A	365-A-03-B	6 - 12	16.7	40	44.1	20		Yes
A	365-A-04-B	6 - 12	11.8	40	44.1	20		Yes
A	365-A-05-B	6 - 12	24.1	40	44.1	20		Yes
A	365-A-06-B	6 - 12	37.7	40	44.1	20		Yes
A	365-A-01-C	12 - 18	95.2	150	35.3	60		
A	365-A-02-C	12 - 18	53.6	150	35.3	60		
A	365-A-03-C	12 - 18	6.4	150	35.3	60		
A	365-A-04-C	12 - 18	16.3	150	35.3	60		
A	365-A-05-C	12 - 18	10.9	150	35.3	60		
A	365-A-06-C	12 - 18	29.2	150	35.3	60		
A	365-A-01-D	18 - 24	8.4	150	12.6	60		
A	365-A-02-D	18 - 24	35.8	150	12.6	60		
A	365-A-03-D	18 - 24	12.4	150	12.6	60		
A	365-A-04-D	18 - 24	6.4	150	12.6	60		
A	365-A-05-D	18 - 24	9.1	150	12.6	60		
A	365-A-06-D	18 - 24	3.4	150	12.6	60		
B	365-B-01-A	0 - 6	36.5	40	36.1	20		Yes
B	365-B-02-A	0 - 6	22	40	36.1	20		Yes
B	365-B-03-A	0 - 6	44	40	36.1	20	Yes	Yes
B	365-B-04-A	0 - 6	36.6	40	36.1	20		Yes
B	365-B-05-A	0 - 6	26.2	40	36.1	20		Yes
B	365-B-06-A	0 - 6	51.4	40	36.1	20	Yes	Yes
B	365-B-01-B	6 - 12	39.7	40	32.6	20		Yes
B	365-B-02-B	6 - 12	18.4	40	32.6	20		Yes
B	365-B-03-B	6 - 12	41	40	32.6	20	Yes	Yes
B	365-B-04-B	6 - 12	30.9	40	32.6	20		Yes
B	365-B-05-B	6 - 12	33	40	32.6	20		Yes
B	365-B-06-B	6 - 12	32.8	40	32.6	20		Yes
B	365-B-01-C	12 - 18	36.5	150	27.6	60		
B	365-B-02-C	12 - 18	19	150	27.6	60		
B	365-B-03-C	12 - 18	48.4	150	27.6	60		
B	365-B-04-C	12 - 18	17.6	150	27.6	60		
B	365-B-05-C	12 - 18	8.1	150	27.6	60		
B	365-B-06-C	12 - 18	35.9	150	27.6	60		

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
B	365-B-01-D	18 - 24	30.6	150	20.4	60		
B	365-B-02-D	18 - 24	22.9	150	20.4	60		
B	365-B-03-D	18 - 24	30.8	150	20.4	60		
B	365-B-04-D	18 - 24	10.2	150	20.4	60		
B	365-B-05-D	18 - 24	4.6	150	20.4	60		
B	365-B-06-D	18 - 24	23.4	150	20.4	60		

**Key**

<LOD = less than the limit of detection

ICP-MS = inductively coupled plasma - mass spectrometry

Refusal = sample could not be obtained

ppm = parts per million

XRF = x-ray fluorescence

*Notes*

There are no data qualifiers in this dataset.

Results in **bold** were analyzed by ICP-MS per EPA 6020.

All other results were analyzed by XRF per EPA 6200.

Property Tax ID:  
Property Address:

00396600000100  
3002 BUTLER ST

Decision Unit (DU)	Sample Identification Number	Depth Horizon (inches)	Arsenic (ppm)				Sample Result Exceeds Action Limit	Average Exceeds Action Limit
			Sample Result	Sample Action Limit	Average Result for DU at Depth	Average Action Limit		
A	229-A-01-B	6 - 12	167	40	128.8	20	Yes	Yes
A	229-A-02-B	6 - 12	119	40	128.8	20	Yes	Yes
A	229-A-03-B	6 - 12	103	40	128.8	20	Yes	Yes
A	229-A-04-B	6 - 12	187	40	128.8	20	Yes	Yes
A	229-A-05-B	6 - 12	85	40	128.8	20	Yes	Yes
A	229-A-06-B	6 - 12	112	40	128.8	20	Yes	Yes
A	229-A-01-C	12 - 18	69.3	150	67.7	60		Yes
A	229-A-02-C	12 - 18	13.6	150	67.7	60		Yes
A	229-A-03-C	12 - 18	140	150	67.7	60		Yes
A	229-A-04-C	12 - 18	81.1	150	67.7	60		Yes
A	229-A-05-C	12 - 18	12	150	67.7	60		Yes
A	229-A-06-C	12 - 18	90	150	67.7	60		Yes
A	229-A-01-D	18 - 24	4.6	150	54.5	60		Yes
A	229-A-02-D	18 - 24	2.9	150	54.5	60		Yes
A	229-A-03-D	18 - 24	<LOD	150	54.5	60		Yes
A	229-A-04-D	18 - 24	7.2	150	54.5	60		Yes
A	229-A-05-D	18 - 24	160	150	54.5	60	Yes	Yes
A	229-A-06-D	18 - 24	150	150	54.5	60		Yes

**Key**

- <LOD = less than the limit of detection
- ICP-MS = inductively coupled plasma - mass spectrometry
- Refusal = sample could not be obtained
- ppm = parts per million
- XRF = x-ray fluorescence

**Notes**

There are no data qualifiers in this dataset.  
Results in **bold** were analyzed by ICP-MS per EPA 6020.  
All other results were analyzed by XRF per EPA 6200.